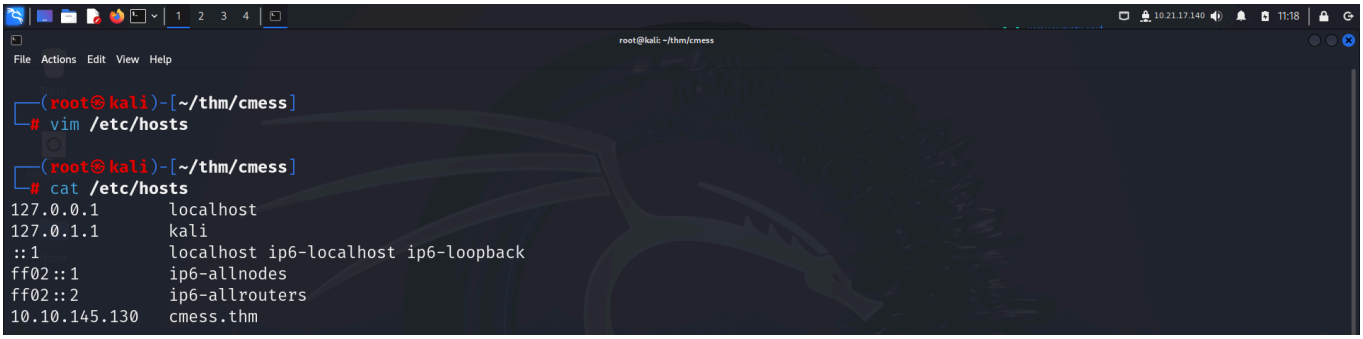
CMESS

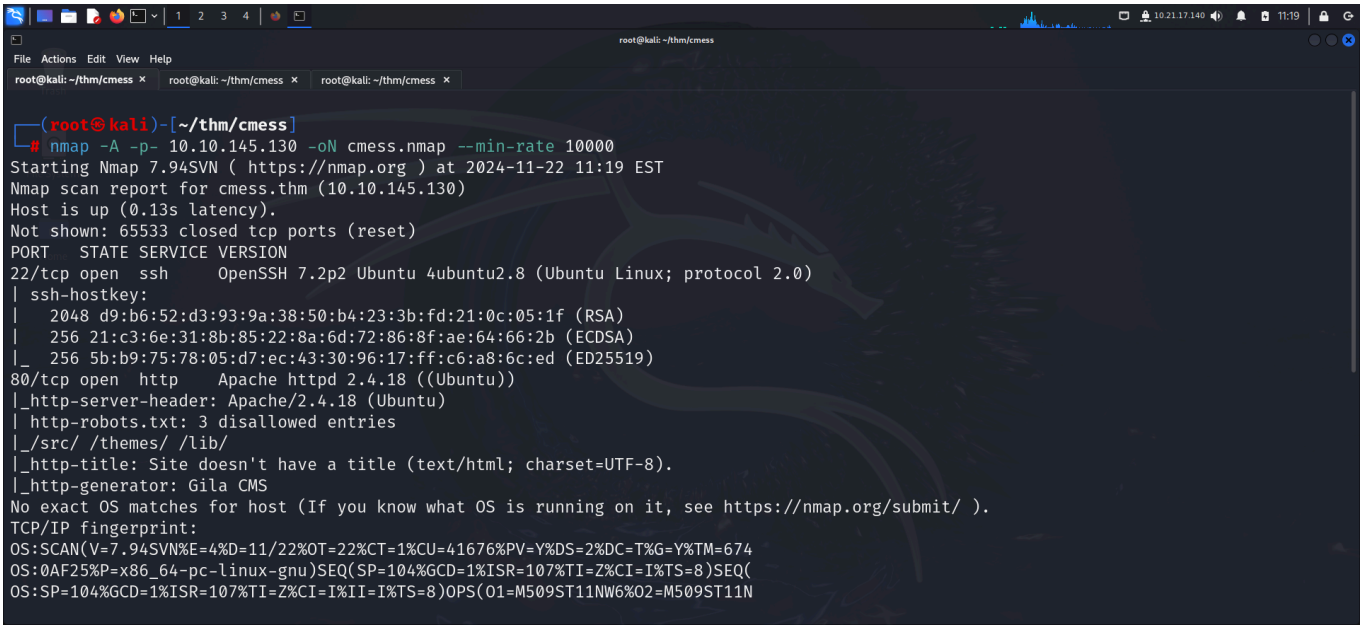
Link to machine : https://tryhackme.com/room/cmess

RECONNAISSANCE

I added the machine hostname to my *hosts* file for proper name resolution.

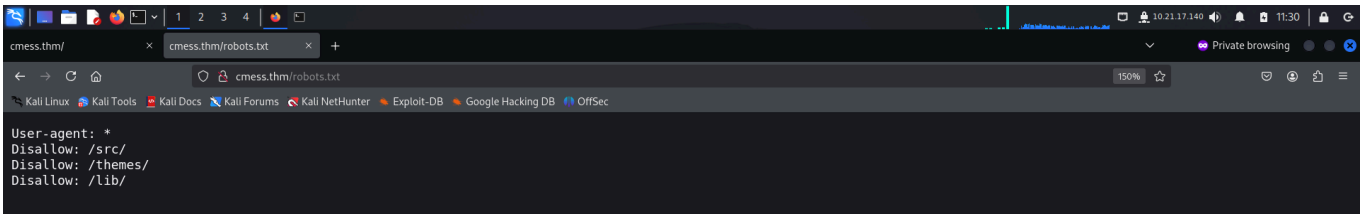


I then performed an **nmap** aggressive scan to find open ports, services running on them, and perform default script scans on them.

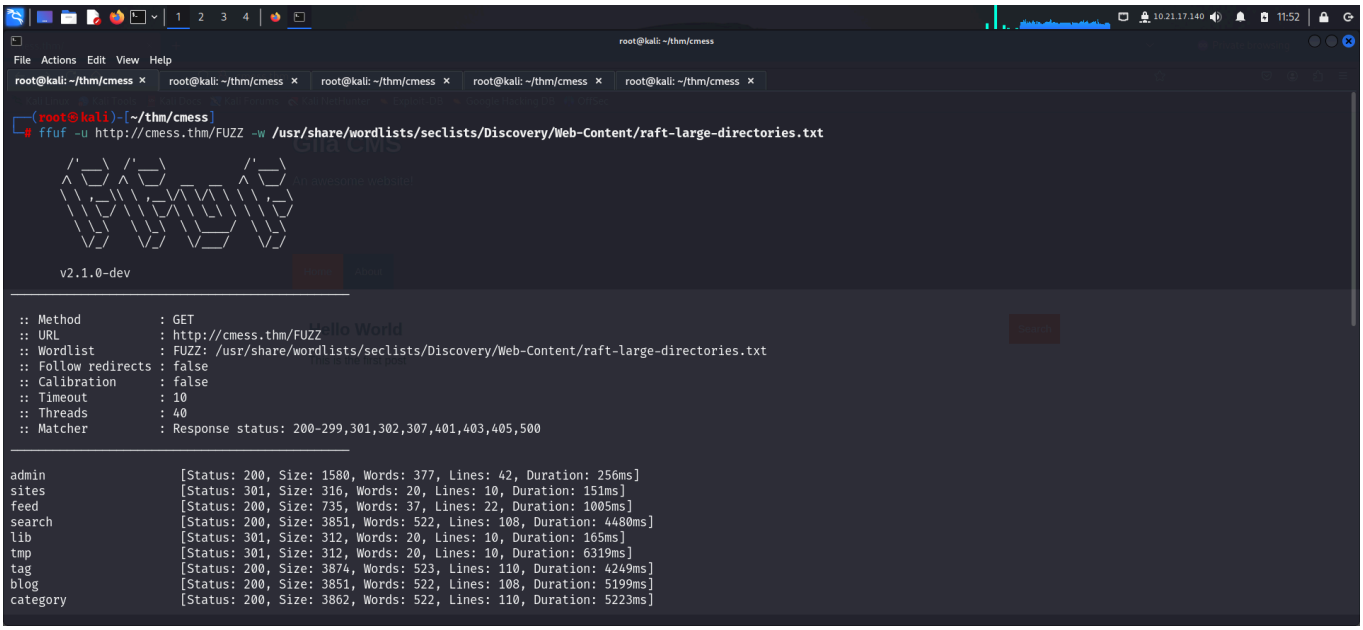


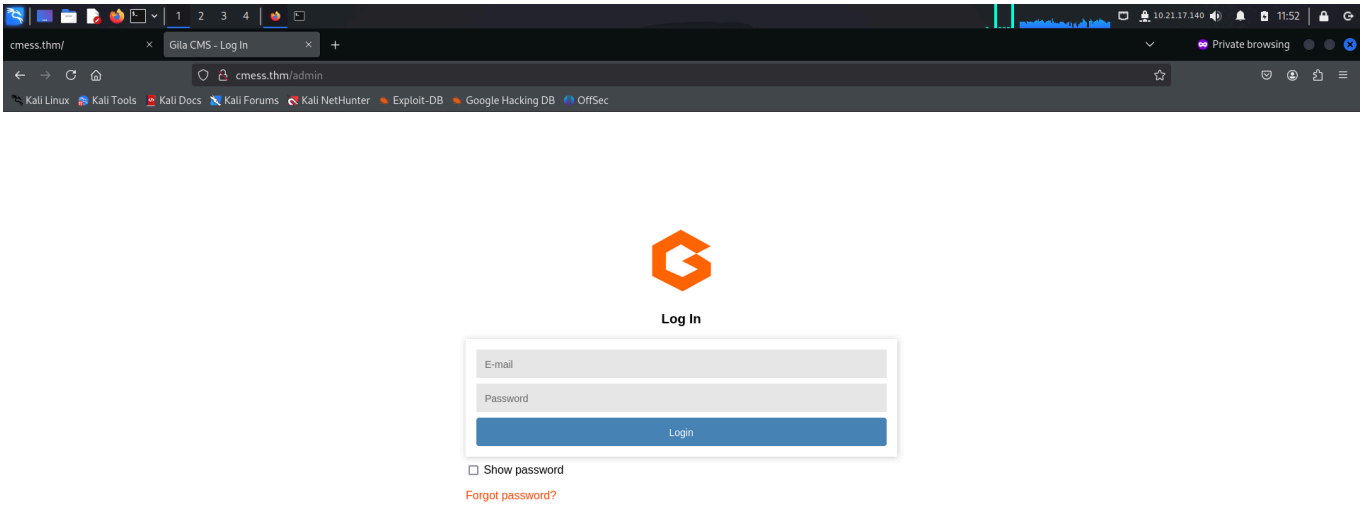
FOOTHOLD

The script scan discovered *robots.txt* file so I accessed it to discover 3 more endpoints.

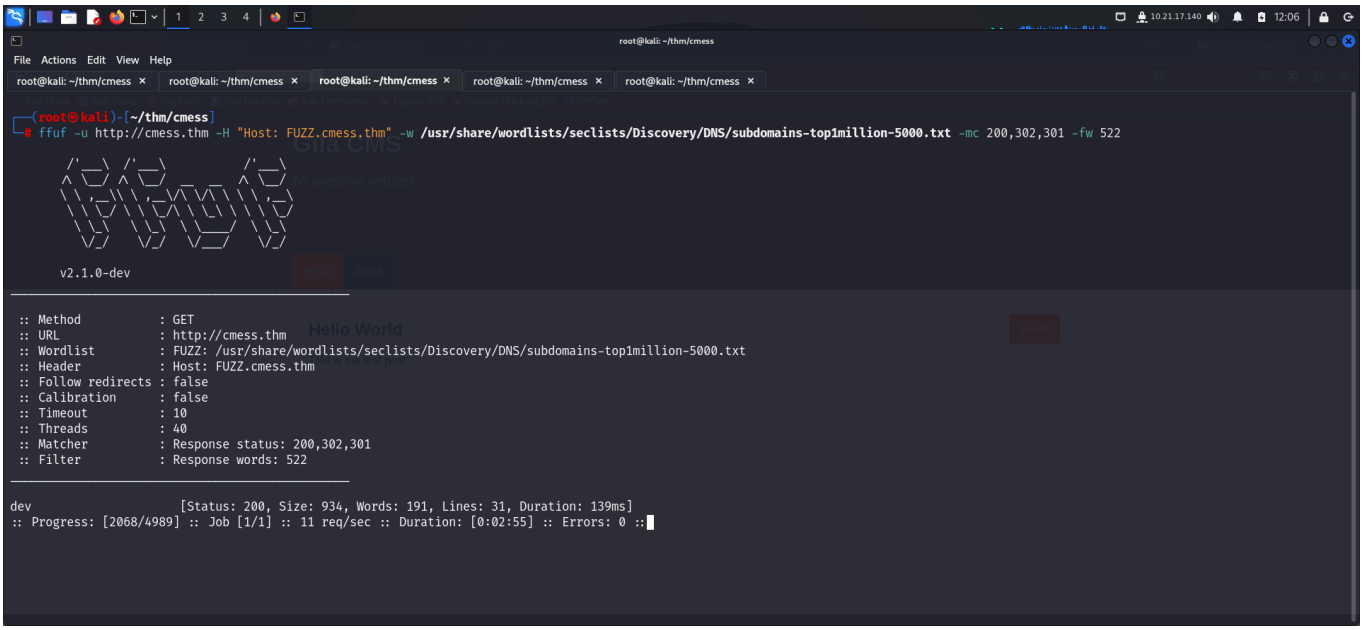


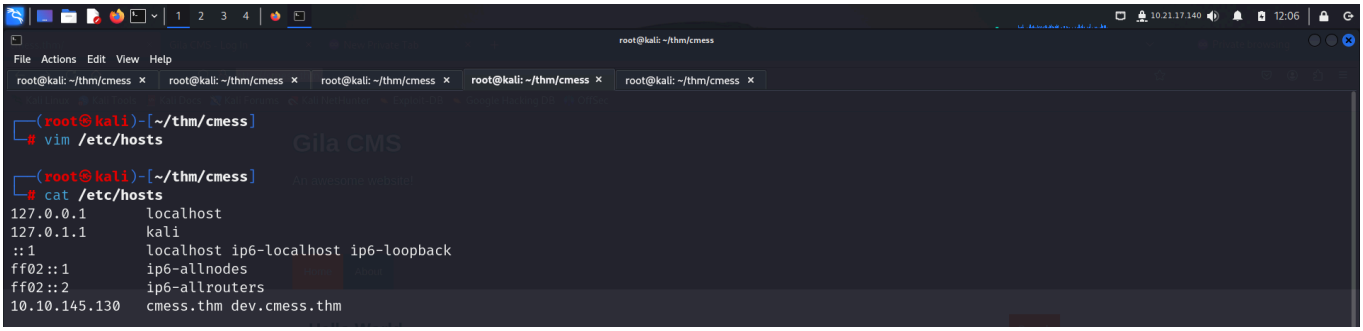
I also bruteforced directories using **ffuf** and found an admin login panel.





I then looked for subdomains and found 1. I added the subdomain to my *hosts* file for correct resolution.





I then accessed the subdomain and found the credentials for *andre*.

Development Log

andre@cmess.thm

Have you guys fixed the bug that was found on live?

support@cmess.thm

Hey Andre, We have managed to fix the misconfigured .htaccess file, we're hoping to patch it in the upcoming patch!

support@cmess.thm

Update! We have had to delay the patch due to unforeseen circumstances

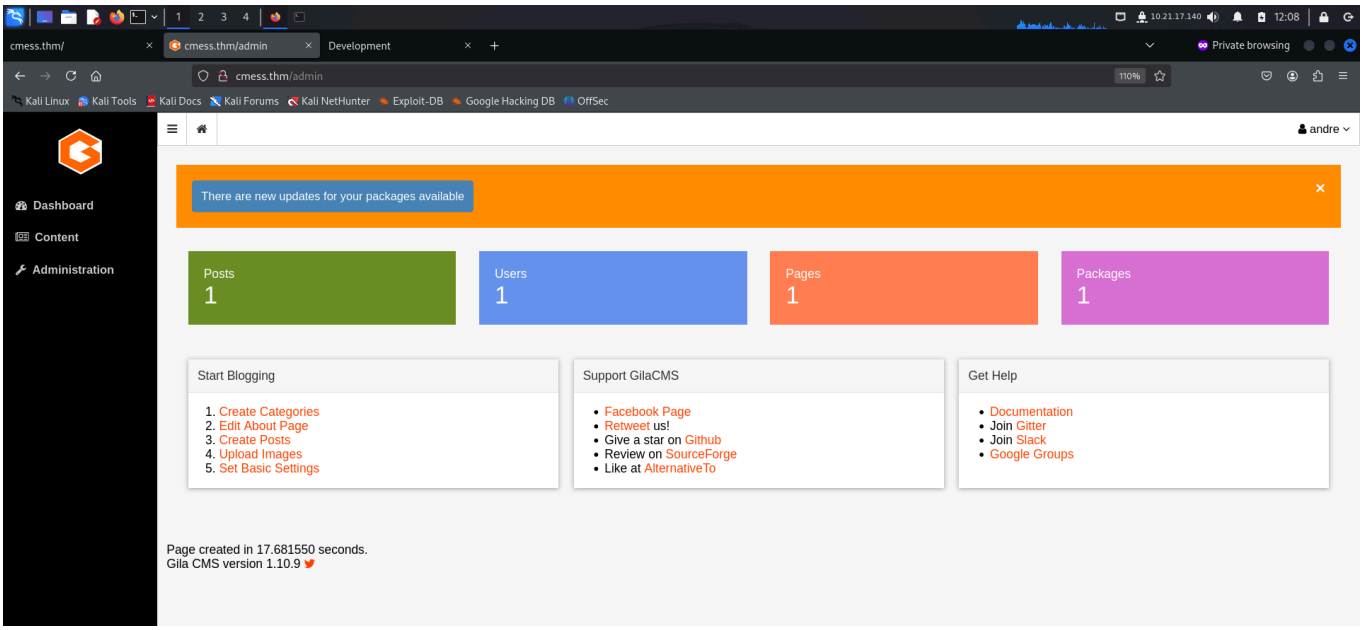
andre@cmess.thm

That's ok, can you guys reset my password if you get a moment, I seem to be unable to get onto the admin panel.

support@cmess.thm

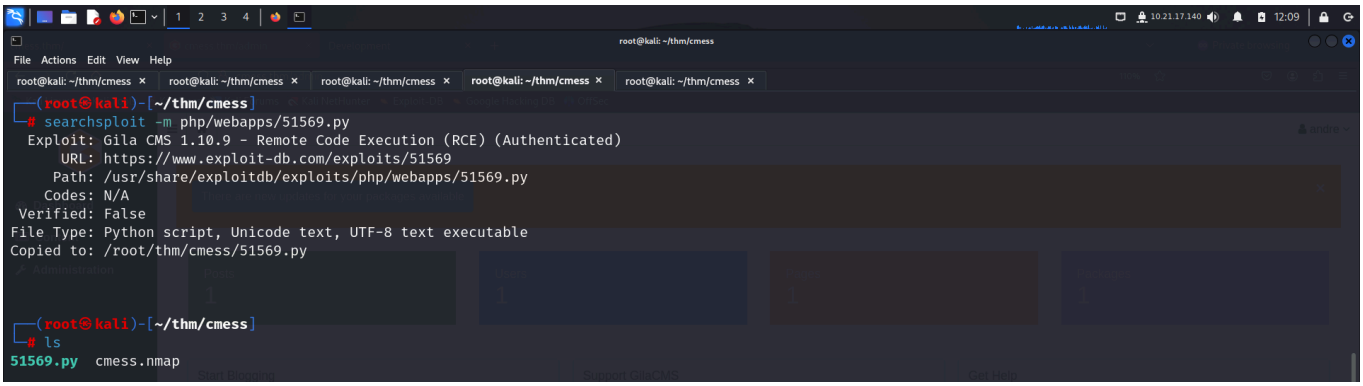
Your password has been reset. Here: KPFTN_f2yxe%

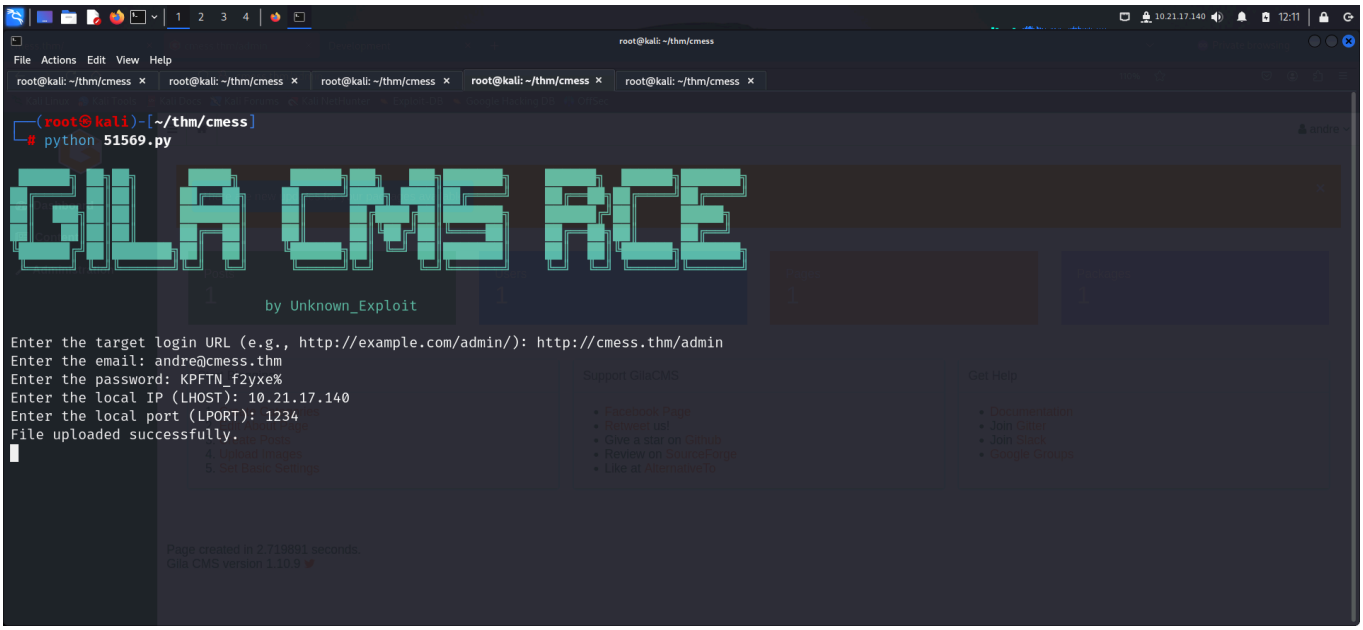
I logged in and got information about the CMS being used and its version.

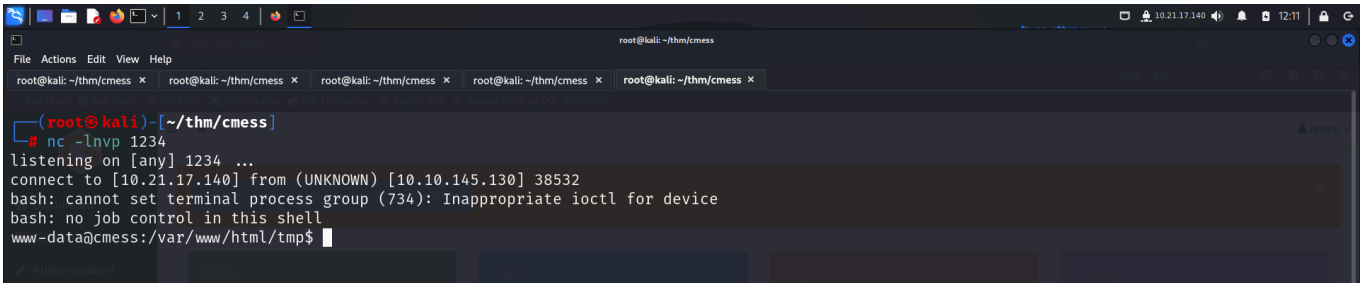


I searched **exploit-db** for exploits related to this CMS and found an RCE exploit for the version being used on the target.

I downloaded the exploit and started a **netcat** listener. Upon execution, I got a reverse shell.



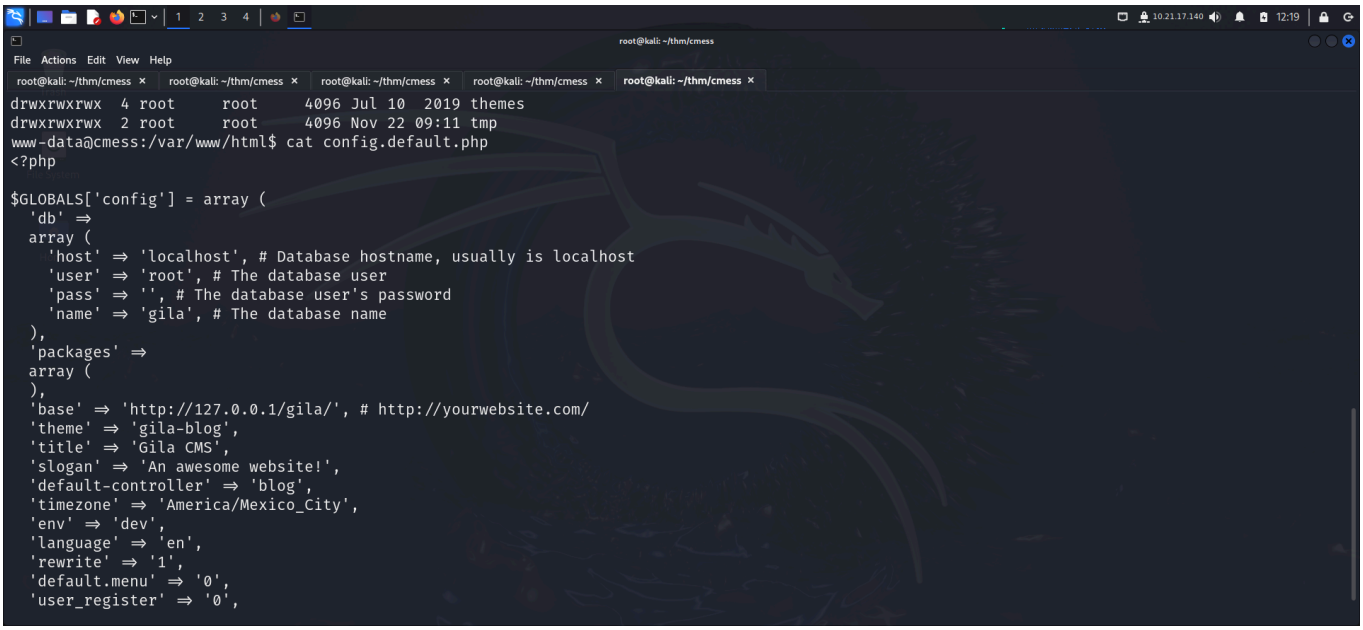


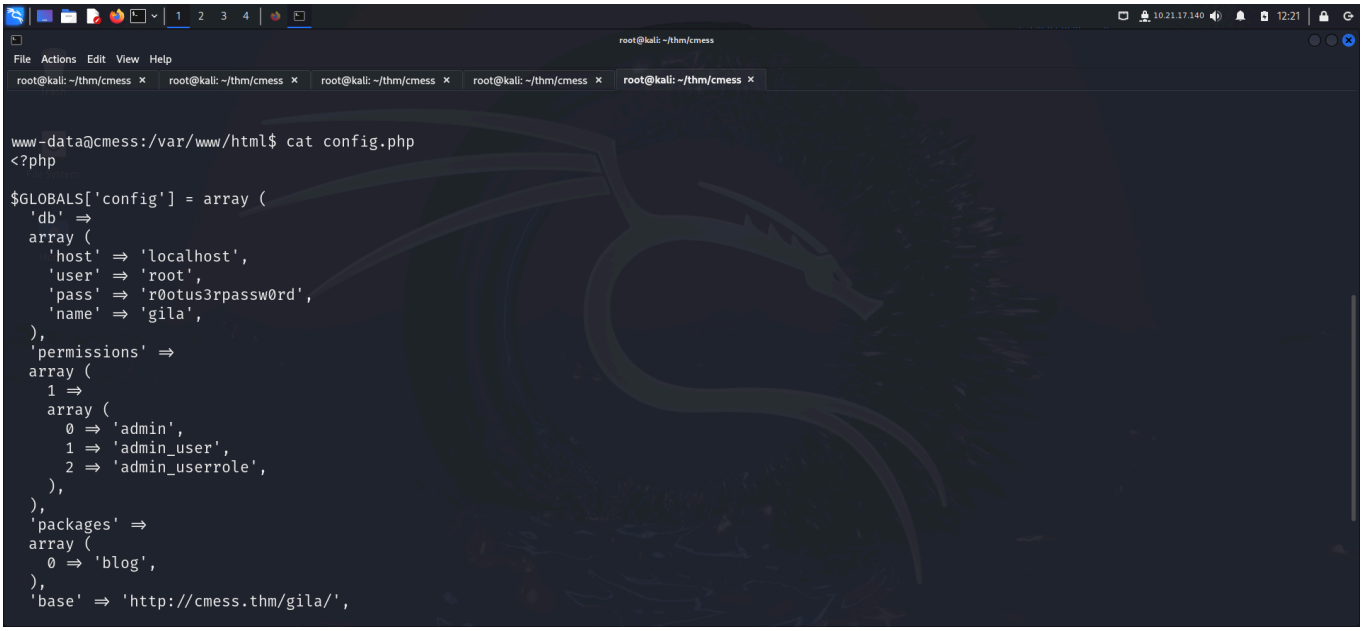


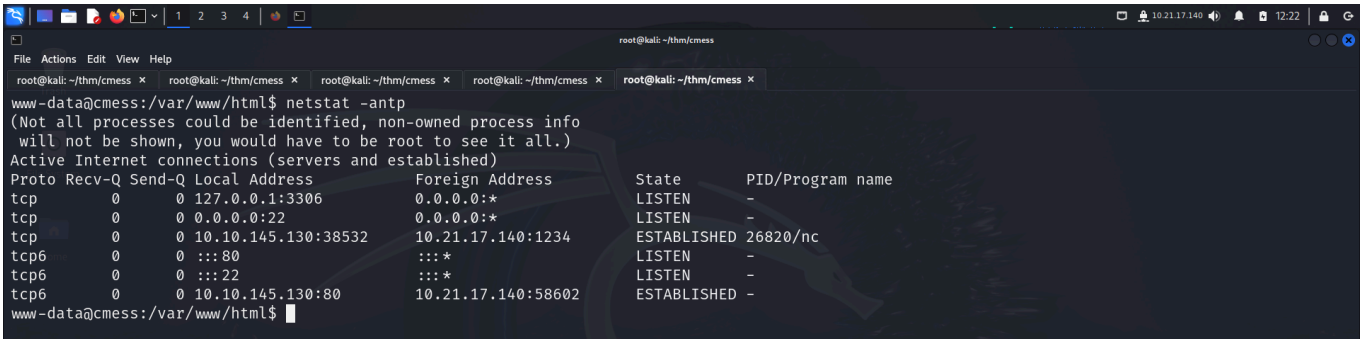
I navigated to the *home* directory but was unable to access the contents of *andre*.

```
www-data@cmess:/$ cd home
www-data@cmess:/home$ ls
andre
www-data@cmess:/home$ cd andre
bash: cd: andre: Permission denied
www-data@cmess:/home$ ls -la
total 12
drwxr-xr-x  3 root  root  4096 Feb  6  2020 .
drwxr-xr-x 22 root  root  4096 Feb  6  2020 ..
drwxr-x---  4 andre andre 4096 Feb  9  2020 andre
www-data@cmess:/home$
```

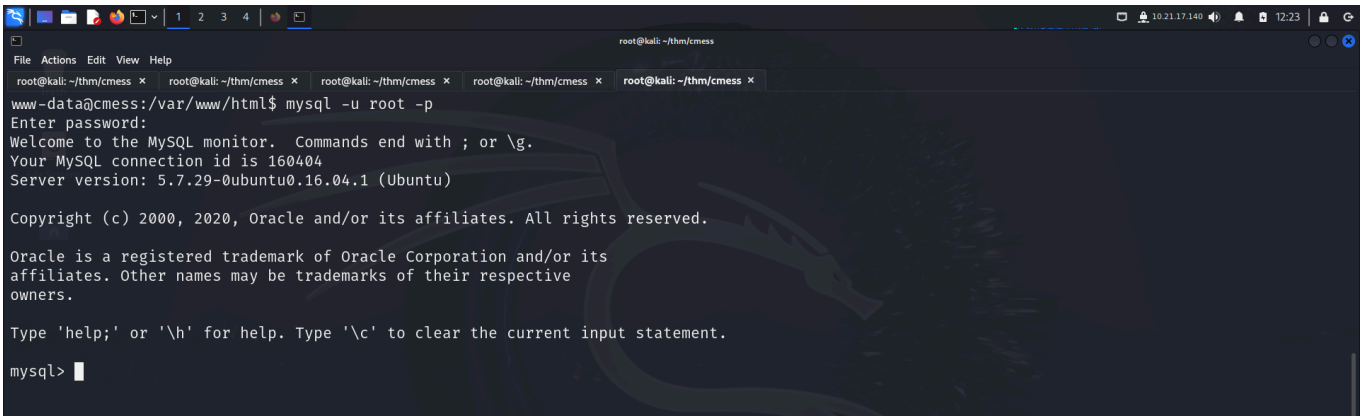
I read the configuration files and found a few credentials. I also discovered an **SQL** service running internally and credentials for it.

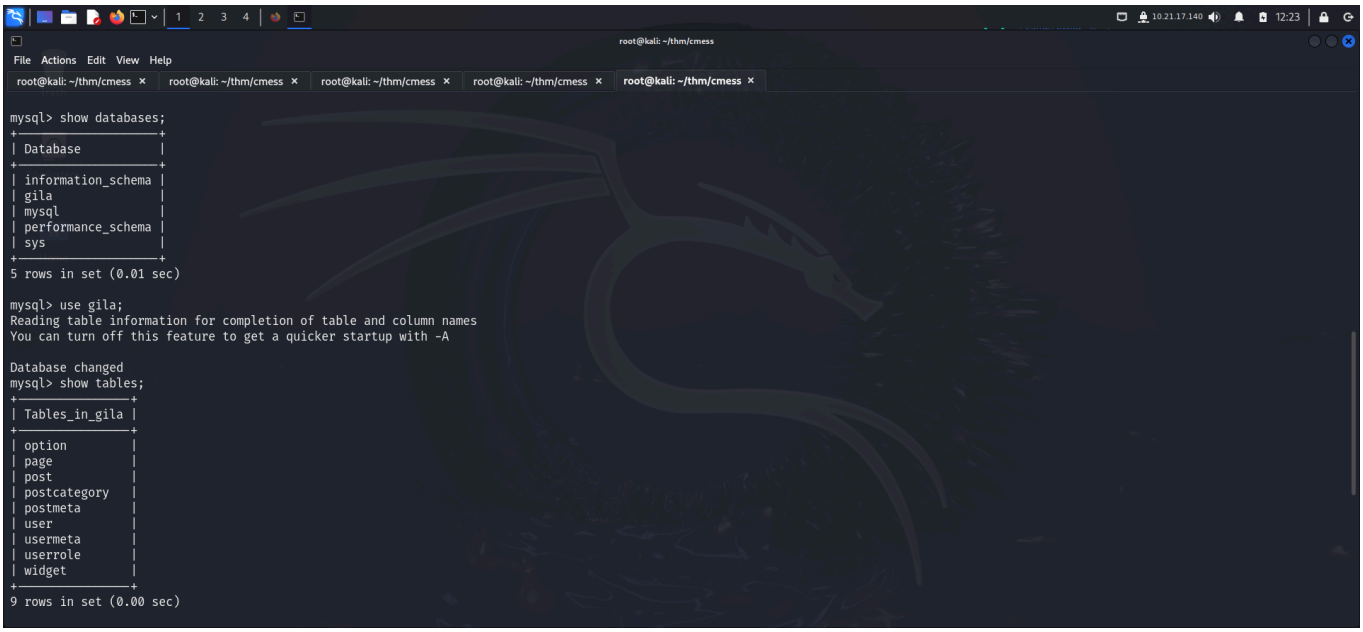


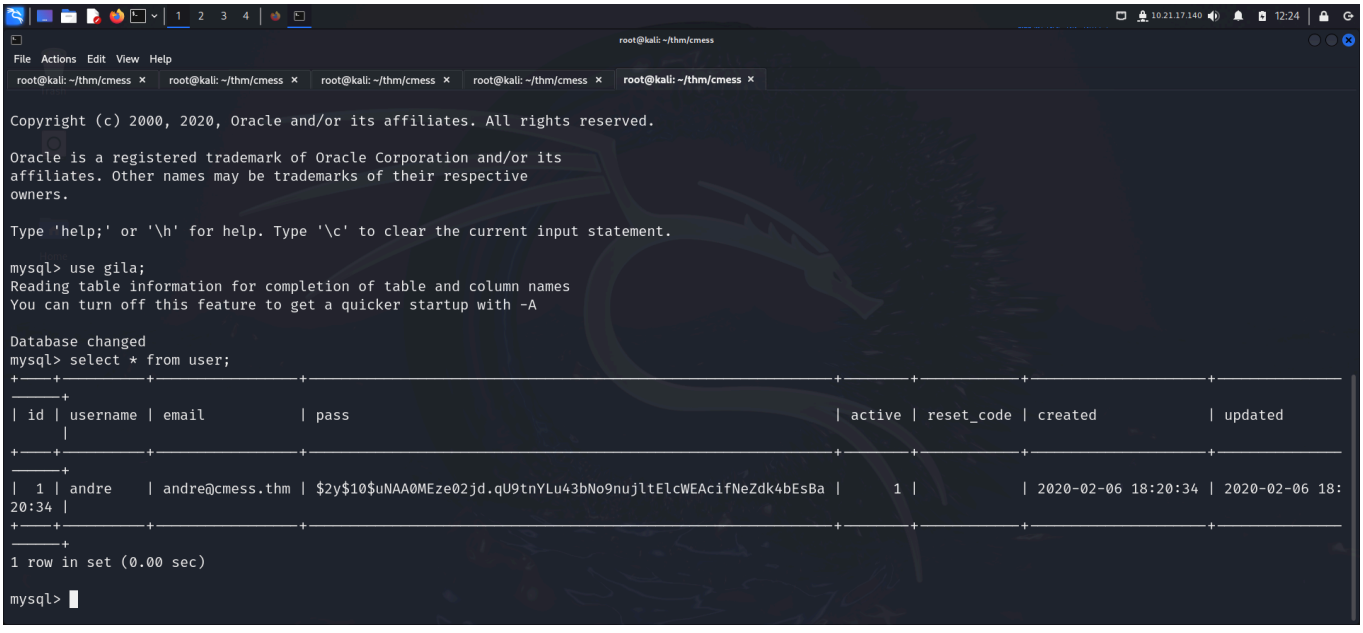




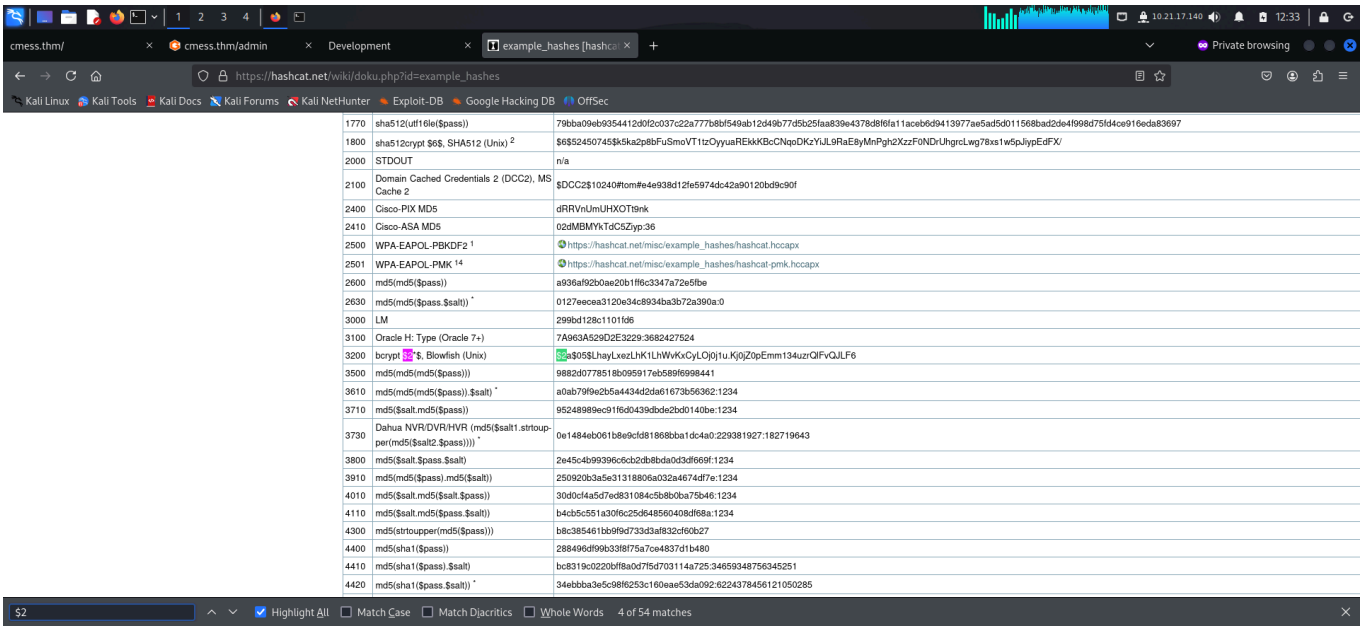
I connected to the **SQL** service running and found a hash for *andre*.





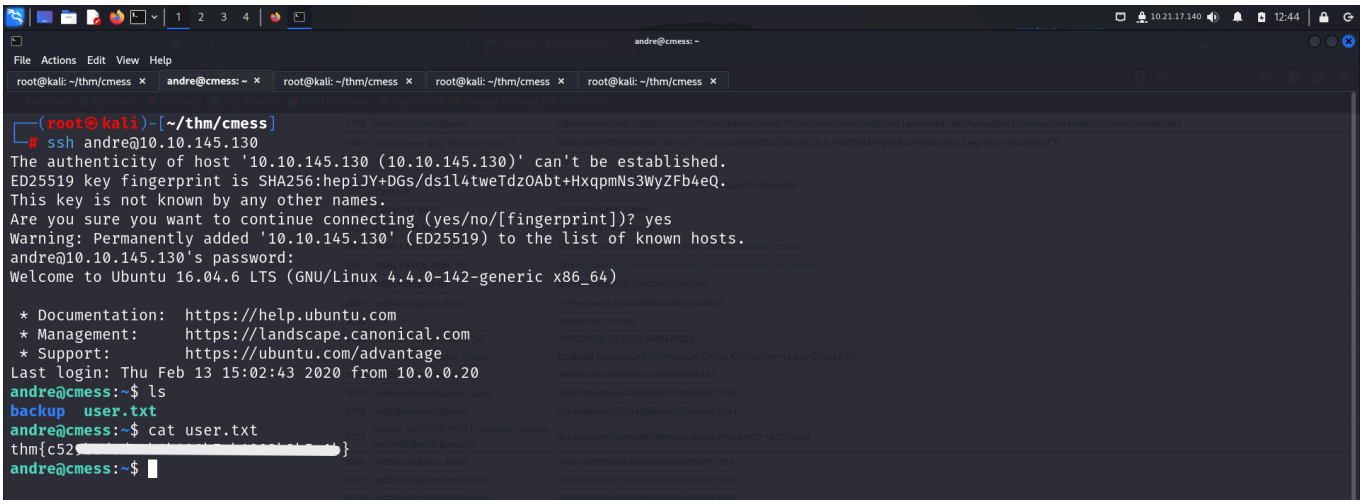


I found the hash type from the **hashcat** hash example's page and tried cracking the hash. However, I failed.



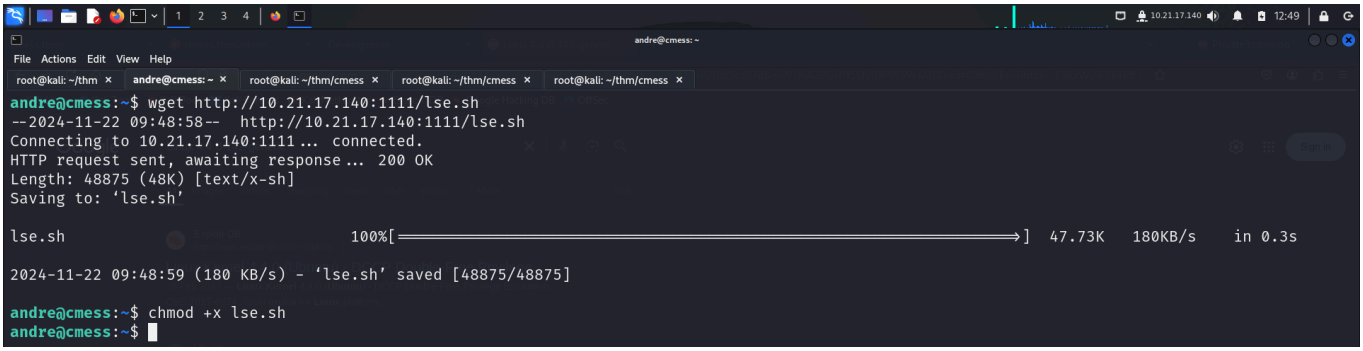
I did further recon and found a password file in the */opt* directory that contained *andre*'s backup password.

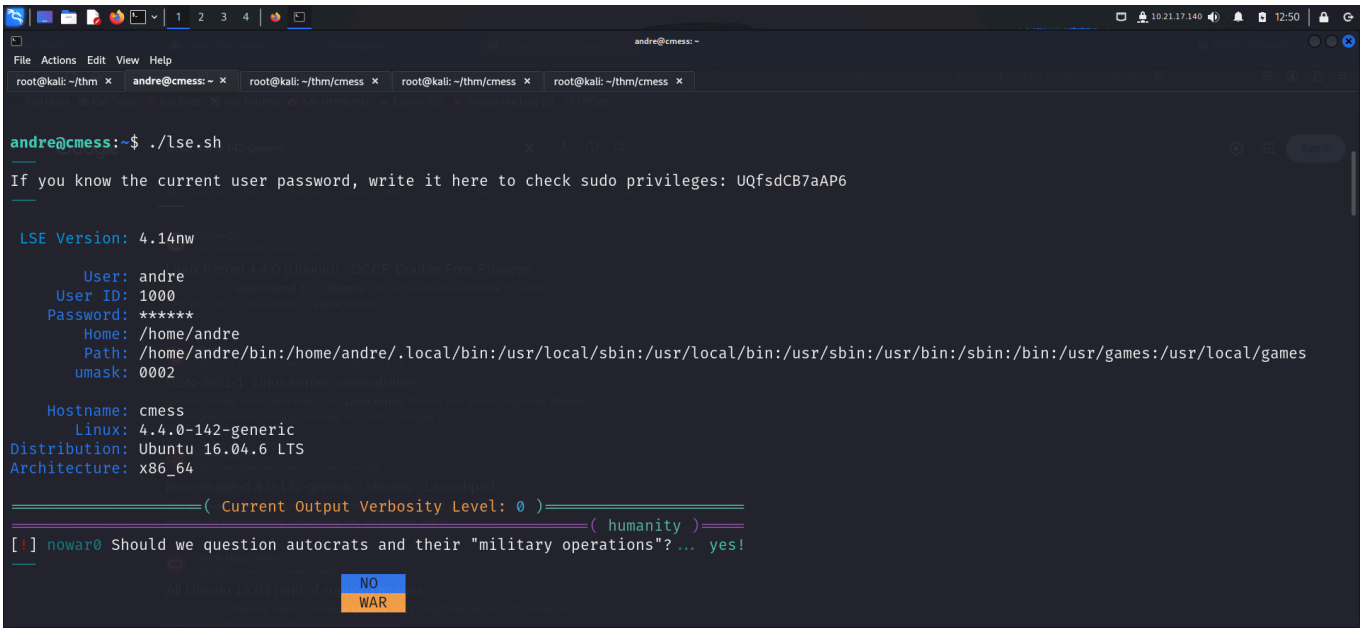
I used the password to log in as *andre* using **ssh** and captured the user flag from the home directory.



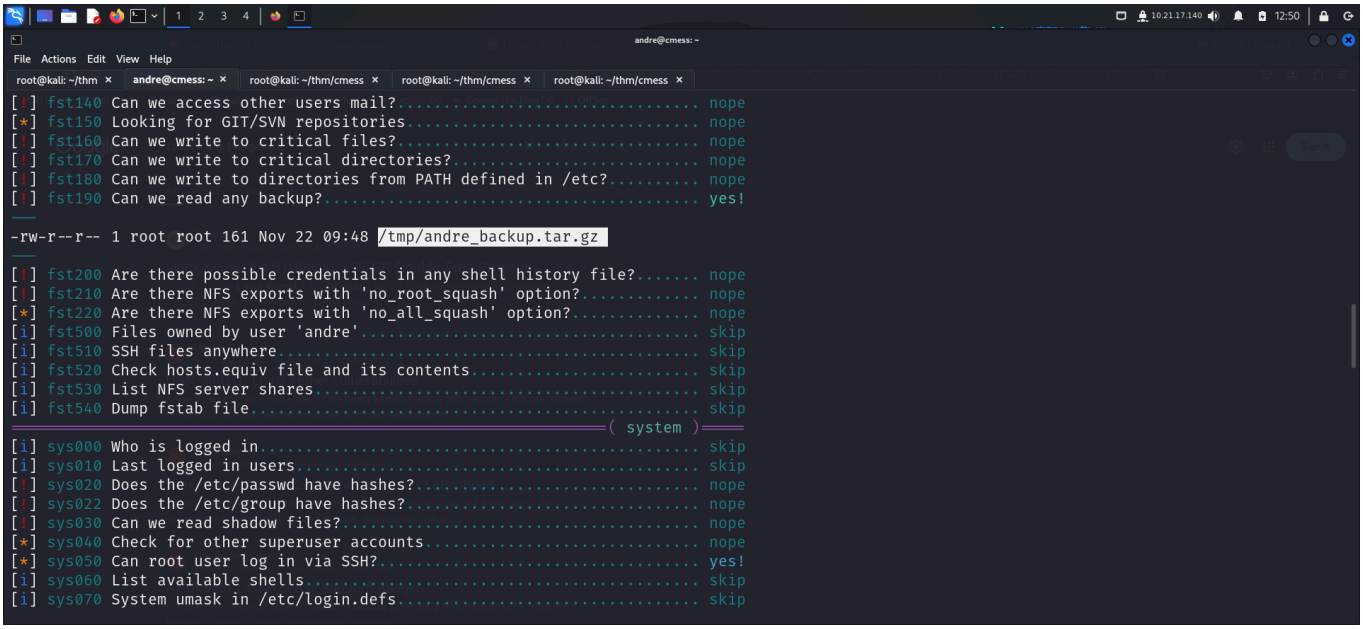
PRIVILEGE ESCALATION

I then downloaded **linux-smart-enumeration** on the target and ran it to find ways for privilege escalation.

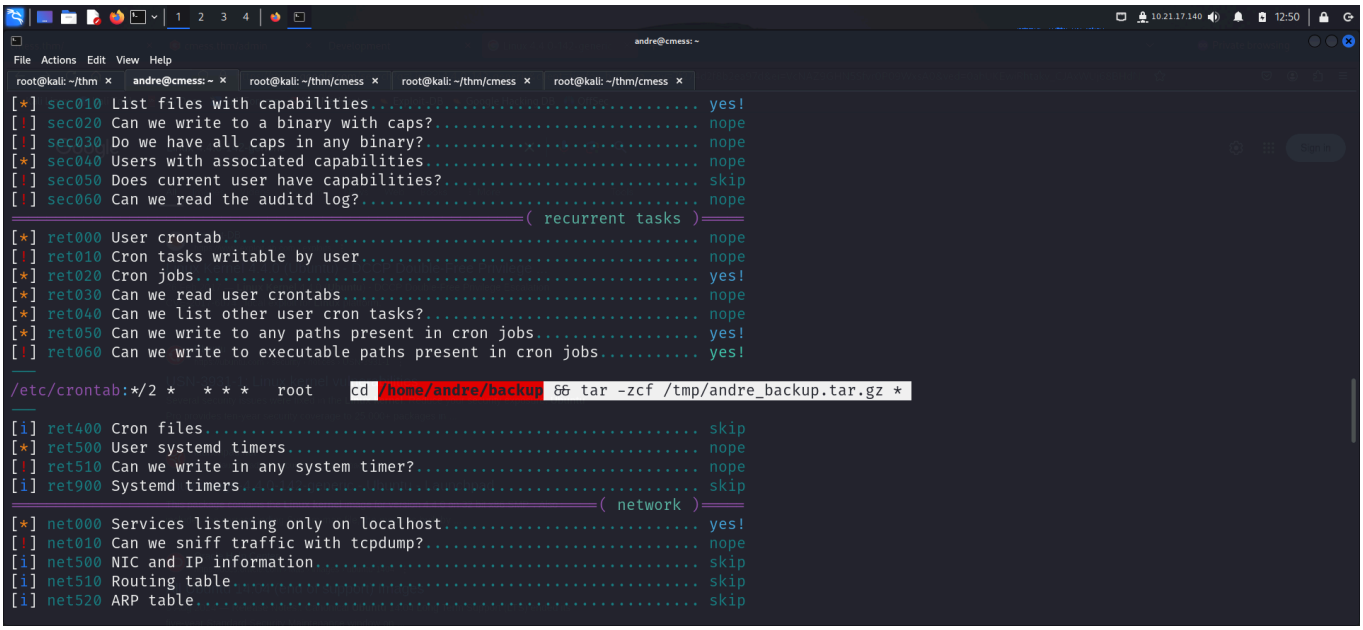




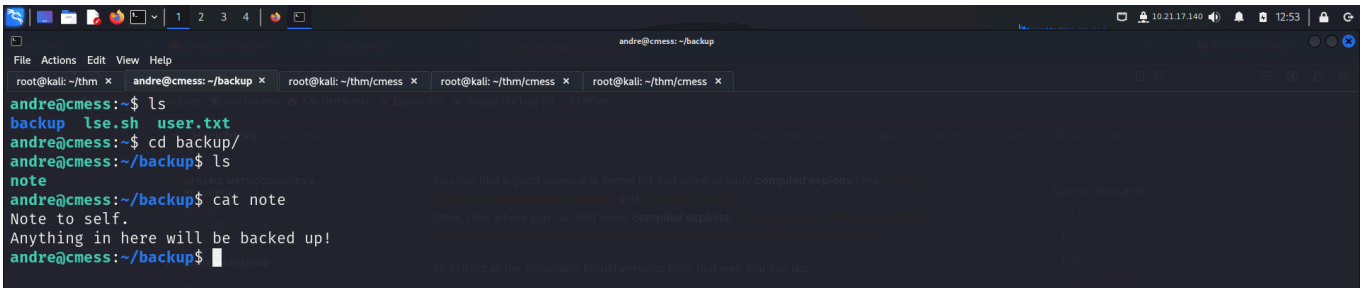
It found I was able to read a backup file in the */tmp* directory.



It also found a cronjob that backed up contents inside the */home/andre/backup* directory.



I visited the directory and found a note.

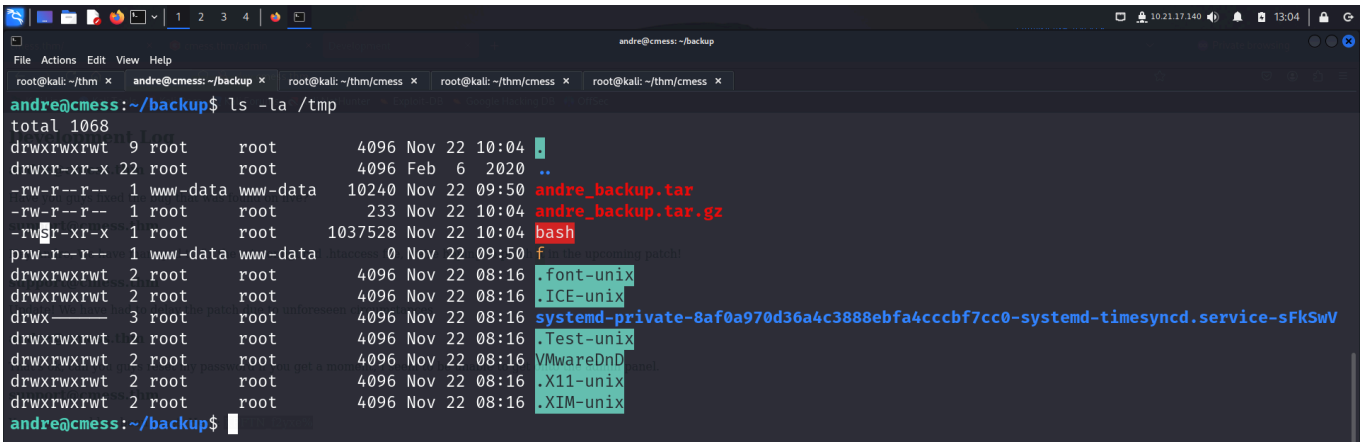


I copied **/bin/bash** to */tmp/bash* and granted it **suid** allowing execution as root. I then created a special filename that tricked **tar** into triggering a checkpoint every 1 file processed. I then abused **tar**'s ability to execute commands at a checkpoint by creating another file.

Hence, when **tar** processed it, it will execute `sh evil.sh`. So when the cron job runs the `tar` command, it triggers a checkpoint every 1 file, executes **evil.sh** and runs this as root creating an **suid** bit on */tmp/bash*.

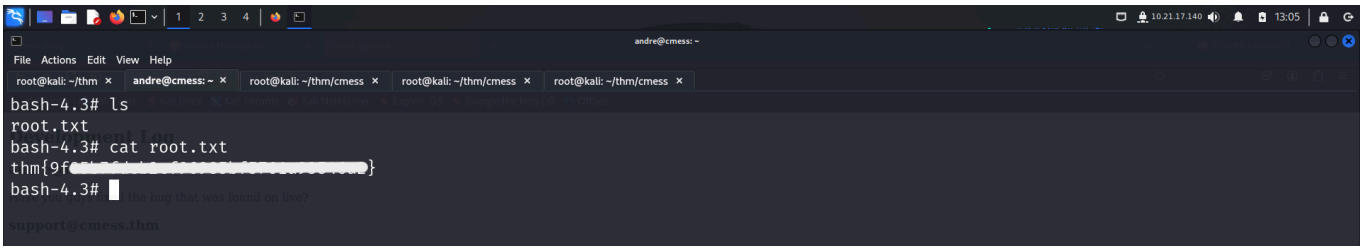
```
andre@cmess:~/backup$ echo 'cp /bin/bash /tmp/bash; chmod u+s /tmp/bash' > evil.sh
andre@cmess:~/backup$ cat evil.sh
cp /bin/bash /tmp/bash; chmod u+s /tmp/bash
andre@cmess:~/backup$ touch "/home/andre/backup/--checkpoint=1"
andre@cmess:~/backup$ touch "/home/andre/backup/--checkpoint-action=exec=sh evil.sh"
andre@cmess:~/backup$
```

After a while, I checked the */tmp* directory to find my file being successfully executed.



I then spawned a privilege **bash** shell and got root access.

I captured the root flag from the */root* flag.



That's it from my side, until next time!