HTB Machine Writeup: Knife

Written up by Ori Iankovitch

start: enumeration

Started with an Nmap scan and found that ports 80 (http), and 22 (ssh) were open.

Port 80 indicate that a web service is probably running on the machine, So i opened the web page and started my investigation clicking on the services buttons but nothing seems to work.

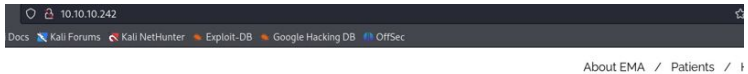
The next step was to start a ‘Gobuster’ scan to look for other directories in the site, I found several configuration files including ‘.htpasswd’ that is usually used to store authentication credentials for http services.

```
┌──(kali㉿kali)-[~/Desktop]
└─$ sudo nmap -p- 10.10.10.242
Starting Nmap 7.94SVN ( https://nmap.org ) at 2024-08-27 19:32 EDT
Nmap scan report for 10.10.10.242
Host is up (0.073s latency).
Not shown: 65533 closed tcp ports (reset)
PORT   STATE SERVICE
22/tcp open  ssh
80/tcp open  http

Nmap done: 1 IP address (1 host up) scanned in 110.68 seconds

┌──(kali㉿kali)-[~/Desktop]
└─$ sudo nmap -p 80 -sV 10.10.10.242
Starting Nmap 7.94SVN ( https://nmap.org ) at 2024-08-27 19:34 EDT
Nmap scan report for 10.10.10.242
Host is up (0.066s latency).

PORT   STATE SERVICE VERSION
80/tcp open  http    Apache httpd 2.4.41 ((Ubuntu))
```




```
┌──(kali㉿kali)-[~/Desktop]
└─$ gobuster dir -u http://10.10.10.242/ -w /usr/share/wordlists/dirb/common.txt
===============================================================
Gobuster v3.6
by OJ Reeves (@TheColonial) & Christian Mehlmauer (@firefart)
===============================================================
[+] Url:                     http://10.10.10.242/
[+] Method:                  GET
[+] Threads:                 10
[+] Wordlist:                /usr/share/wordlists/dirb/common.txt
[+] Negative Status codes:   404
[+] User Agent:              gobuster/3.6
[+] Timeout:                 10s
===============================================================
Starting gobuster in directory enumeration mode
===============================================================
/.hta                (Status: 403) [Size: 277]
/.htaccess           (Status: 403) [Size: 277]
/.htpasswd           (Status: 403) [Size: 277]
/index.php           (Status: 200) [Size: 5815]
/server-status       (Status: 403) [Size: 277]
Progress: 4614 / 4615 (99.98%)
===============================================================
Finished
===============================================================
```

At EMA we're taking care to a whole new level . . .

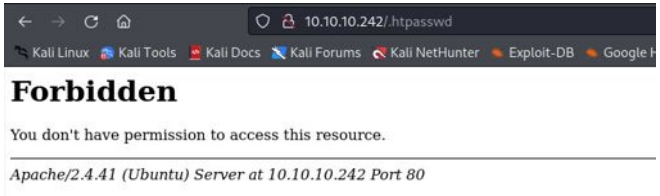
Taking care of our

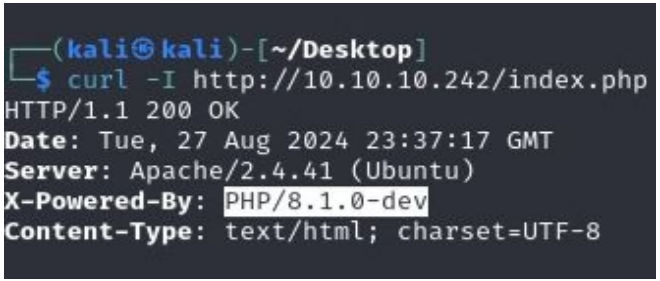
I attempted to access the '.htpasswd' webpage, knowing it was likely to fail, as expected, I received a Forbidden response.

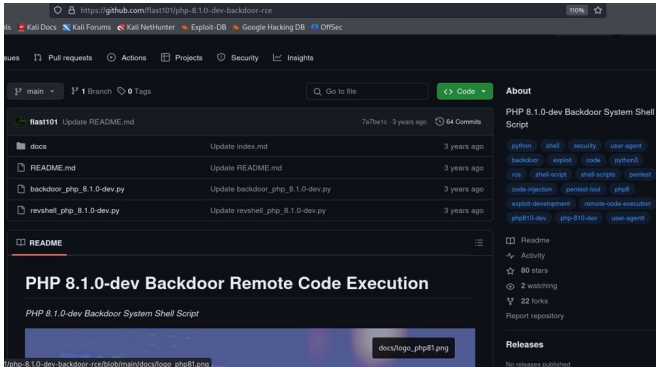
The next step was to use curl to access the index.php page I found, discovering that the server is running the development version of PHP, PHP/8.1.0-dev.

After a quick Google search, I discovered that this PHP version has a backdoor vulnerability. I found a backdoor script on GitHub that exploits this vulnerability, and downloaded it.

"PHP verion 8.1.0-dev was released with a backdoor on March 28th 2021, but the backdoor was quickly discovered and removed. If this version of PHP runs on a server, an attacker can execute arbitrary code by sending the User-Agentt header."



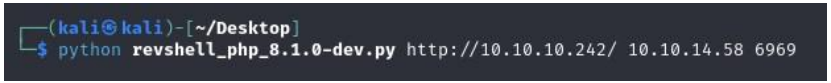


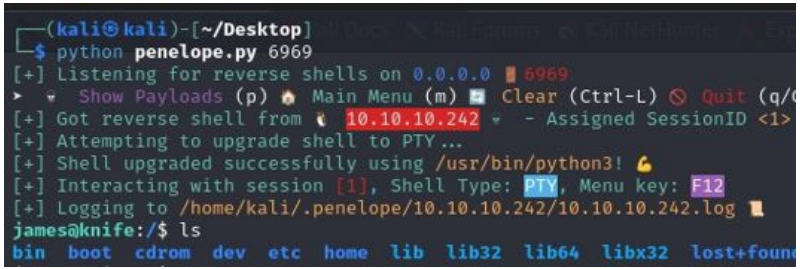


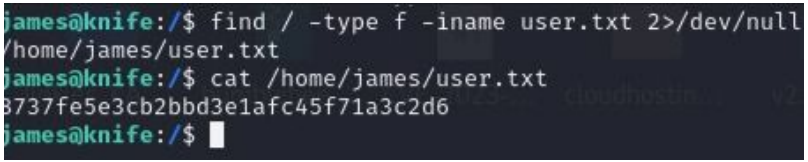
Foothold:

I started a listener using ‘penelope’ to establish a more stable shell, executed the command using the syntax provided by the script, and successfully obtained a shell.

Used the ‘find’ command to look for the ‘user.txt’ file, and got the first flag.







Privilege escalation:

I ran the command sudo -l to check which commands the user could execute as root and discovered that the user can run knife, a command-line tool associated with Chef. Chef is an open-source configuration management tool used for automating the setup, deployment, and management of infrastructure and applications.

After some research, I found that the command “knife exec -E 'system("/bin/bash")'”, runs a Ruby script using knife to open a new bash shell with root privileges.

I obtained a root shell and successfully retrieved the second flag.

Knife has been Pwned!

Congratulations **shokoyanko**, best of luck in capturing flags ahead!

#21055	27 Aug 2024	RETIRED
MACHINE RANK	PWN DATE	MACHINE STATE