

## WRITEUP [Bandit Lv12-21]

Lv 12->13

Application used: ssheasy.com

```
bandit12@bandit:~$ man mkdir
No manual entry for mkdir
bandit12@bandit:~$ man mkdir
bandit12@bandit:~$ mkdir /tmp/atharva
bandit12@bandit:~$ cp data.txt /tmp/atharva
bandit12@bandit:~$ cd /tmp/atharva
bandit12@bandit:/tmp/atharva$ ls
data.txt
bandit12@bandit:/tmp/atharva$ xxd -r data.txt > data
bandit12@bandit:/tmp/atharva$ ls
data  data.txt
bandit12@bandit:/tmp/atharva$ file data
data: gzip compressed data, was "data2.bin", last modified: Thu Oct 5 06:19:20 2023, max compression, from Unix, original size modulo 2^32 573
bandit12@bandit:/tmp/atharva$ mv data file.gz
bandit12@bandit:/tmp/atharva$ gzip -d file.gz
bandit12@bandit:/tmp/atharva$ ls
data.txt  file
bandit12@bandit:/tmp/atharva$ file file
file: bzip2 compressed data, block size = 900k
bandit12@bandit:/tmp/atharva$ mv file file1.bz2
bandit12@bandit:/tmp/atharva$ bzip2 -d file1.bz2
bandit12@bandit:/tmp/atharva$ ls
data.txt  file1
bandit12@bandit:/tmp/atharva$ file1
Command 'file1' not found, did you mean:
  command 'file2' from deb file-kanji (1.1-20)
  command 'file' from deb file (1:5.41-3ubuntu0.1)
Try: apt install <deb name>
bandit12@bandit:/tmp/atharva$ file file1
file1: gzip compressed data, was "data4.bin", last modified: Thu Oct 5 06:19:20 2023, max compression, from Unix, original size modulo 2^32 2048
bandit12@bandit:/tmp/atharva$ mv file1 file2.gz
bandit12@bandit:/tmp/atharva$ gzip -d file2.gz
bandit12@bandit:/tmp/atharva$ file file2
file2: POSIX tar archive (GNU)
bandit12@bandit:/tmp/atharva$
```

```
bandit12@bandit:/tmp/atharva$ mv file2 file3.tar
bandit12@bandit:/tmp/atharva$ tar xf file3.tar
bandit12@bandit:/tmp/atharva$ ls
data5.bin  data.txt  file3.tar
bandit12@bandit:/tmp/atharva$ file data5.bin
data5.bin: POSIX tar archive (GNU)
bandit12@bandit:/tmp/atharva$ mv data5.bin file4.tar
bandit12@bandit:/tmp/atharva$ tar xf file4.tar
bandit12@bandit:/tmp/atharva$ ls
data6.bin  data.txt  file3.tar  file4.tar
```

```
bandit12@bandit:/tmp/atharva$ file data6.bin
data6.bin: bzip2 compressed data, block size = 900k
bandit12@bandit:/tmp/atharva$ mv data6.bin file5.bz2
bandit12@bandit:/tmp/atharva$ bzip2 -d file5.bz2
bandit12@bandit:/tmp/atharva$ file file5
file5: POSIX tar archive (GNU)
bandit12@bandit:/tmp/atharva$ mv file5 file6.tar
bandit12@bandit:/tmp/atharva$ tar xf file6.tar
bandit12@bandit:/tmp/atharva$ ls
data8.bin  data.txt  file3.tar  file4.tar  file6.tar
bandit12@bandit:/tmp/atharva$ file data8.bin
data8.bin: gzip compressed data, was "data9.bin", last modified: Thu Oct 5 06:19:20 2023, max compression, from Unix, original size modulo 2^32 49
bandit12@bandit:/tmp/atharva$ mv data8.bin file7.gz
bandit12@bandit:/tmp/atharva$ gzip -d file7.gz
bandit12@bandit:/tmp/atharva$ file file7
file7: ASCII text
bandit12@bandit:/tmp/atharva$ cat file7
The password is wbWdIBxEir4CaE8LaPhauuOo6pwRmrDw
bandit12@bandit:/tmp/atharva$
```

In this, we had to first make our own folder using mkdir command and copy data.txt file over there to get the password, since data.txt is compressed a lot we decompressed it from it's gzip and bzip2 types using `gzip -d/ bzip2 -d` commands and extracted .tar files until we got the filetype as ASCII from where we received our password as “**wbWdIBxEir4CaE8LaPhauuOo6pwRmrDw**”

Exit to logout of current bandwit12 and login to bandwit13 using this password

BANDWIT 13->14

```
bandit13@bandit:~$ ls
sshkey.private
bandit13@bandit:~$ ssh -i sshkey.private bandit14@localhost -p 2220
```

In this level we get into bandit13 and see the file sshkey.private in it, since pass is visible to only bandit14 users we login to bandit14 using this key, ssh -i helps to read the private key as an identification command through which we can login to bandit14

In bandit14 in order to get the password we have to use cat command with the file where password is stored and we get

**“fGrHPx402xGC7U7rXKDaxiWFTOiFOENq”**

## Lvl 14->15

```
bandit14@bandit:~$ man nc
bandit14@bandit:~$ nc localhost 30000
fGrHPx402xGC7U7rXKDaxiWFTOiFOENq
Wrong! Please enter the correct current password
fGrHPx402xGC7U7rXKDaxiWFTOiFOENq
bandit14@bandit:~$ nc localhost 30000
fGrHPx402xGC7U7rXKDaxiWFTOiFOENq
Correct!
jN2kgmIXJ6fShzhT2avhotn4Zcka6tnt
```

In this, we learn the nc command, [netcat helps in port scanning TCP and UDP connections etc], we have to switch to port 30000 and paste password of bandit14 there to retrieve password of bandit15

using nc we switch to port 30000 and then paste the password of bandit14 successfully getting password of bandit15 which is

**“jN2kgmIXJ6fShzhT2avhotn4Zcka6tnt”**

## Lvl 15->16

```
command 'an' from deb mono-devel (6.8.0.105+dfsg-3.2)
command 'mab' from deb mysql-sandbox (3.2.05-1)
command 'mhn' from deb mailutils-mh (1:3.14-1)
command 'mhn' from deb nmh (1.7.1-11)
command 'mon' from deb mon (1.3.6-2)
command 'mvn' from deb maven (3.6.3-5)
command 'mln' from deb mmv (1.01b-19build1)
Try: apt install <deb name>
bandit15@bandit:~$ man nc
bandit15@bandit:~$ man nc | grep ssl
--ssl          Connect or listen with SSL
--ssl-cert     Specify SSL certificate file (PEM) for listening
--ssl-key      Specify SSL private key (PEM) for listening
--ssl-verify   Verify trust and domain name of certificates
--ssl-trustfile PEM file containing trusted SSL certificates
--ssl-ciphers  Cipherlist containing SSL ciphers to use
--ssl-alpn     ALPN protocol list to use.

--ssl (Use SSL)
--ssl-verify (Verify server certificates)
    In client mode, --ssl-verify is like --ssl except that it also requires verification of the server certificate. Ncat comes with a
    certificates; these will also be used if available. Use --ssl-trustfile to give a custom list. Use -v one or more times to get
--ssl-cert certfile.pem (Specify SSL certificate)
    (in connect mode). Use it in combination with --ssl-key.
--ssl-key keyfile.pem (Specify SSL private key)
    This option gives the location of the PEM-encoded private key file that goes with the certificate named with --ssl-cert.
--ssl-trustfile cert.pem (List trusted certificates)
    combined with --ssl-verify. The argument to this option is the name of a PEM file containing trusted certificates. Typically, the
--ssl-ciphers cipherlist (Specify SSL ciphersuites)
--ssl-alpn alpn (Specify ALPN protocol list)
    http://www.openssl.org
bandit15@bandit:~$ nc --ssl localhost 30000
jN2kgmIXJ6fShzhT2avhotn4Zcka6tnt
Correct!
JQtTFapK48eyHwDlI98XGR50qcLOaIl1
```

Honestly, this one was hardest for me specifically because of ssl encryption thing had to google out ways to solve such problem just to know that instead of nc we can use ncat which is net concatenate which is similar to nc command

using “ncat –ssl localhost 30001” found out using the man command of the function we can switch to port 30001 and type the password of bandit15 to access password for bandit16 which is

“JQtTfApK4SeyHwDII9SXGR50qcIOAi1l”

## Lvl 16->17

```
bandit16@bandit:~$ man nmap
bandit16@bandit:~$ nmap localhost -p 31000-32000
Starting Nmap 7.80 ( https://nmap.org ) at 2023-10-27 20:29 UTC
Nmap scan report for localhost (127.0.0.1)
Host is up (0.00010s latency).
Not shown: 996 closed ports
PORT      STATE SERVICE
31046/tcp  open  unknown
31518/tcp  open  unknown
31691/tcp  open  unknown
31790/tcp  open  unknown
31960/tcp  open  unknown
```

```
bandit16@bandit:~$ ncat localhost --ssl 31790
JQtTfApK4SeyHwDII9SXGR50qcIOAi1l
Correct!
-----BEGIN RSA PRIVATE KEY-----
MIIEogIBAAKCAQEAvMokuiFmMg6HL2YPIOjon6iWfBp7c3jx34YkYWqUH57SudyJ
imZzeyGC0gtZPGUjUSxiJSWI/oTqexh+cAMTSMlOJf7+BrJObArnxd9Y7YT2bRPQ
Ja6Lzb558YW3FZl87ORio+rW4LDCND2lUvLE/GL2GWyuKN0K5icd5TbtJzEkQTu
DSt2mcNn4rHAL+JFr56o4T6z8WWAW18BR6yGrMq7Q/kALHYW30ekePQAZL0VUYbW
JGTi65CxbCnzc/w4+mqQyvmzpWtMAzJTzAZQxNbK2MBGySxDLrjg0LWN6sK7wNX
xOYVztz/zbIkPjfkUljHS+9EbVNj+D1XF0JuaQIDAQABAoIBABagpxpM1aoLWfvd
KHcj10nqcoBc4oE11aFYQwik7xfW+24pRNUDE6SFthOar69jp5RLwD1NhPx3iBl
J9nOM8OJUVToum43UOS8YxF8WwhXriYGnc1sskbwpXOUDc9uX4+UESzH22P29ovd
d8WErY0gPxun8pbJLmxkAtWNhpMvfe0050vk9TL5wqbu9AlbssgTcCXkMQnFw9nc
YNN6DDP2lbcBrvgT9CNL6C+ZKufD52yOQ9gQkWFTEQpjTf4uNtJom+asvlpms8A
vLY9r60wYSvmZhnqBuj7lyCtXMTulkkd4w7F77k+DjHoAXyxcUp1DGL51sOmama
+TOWWgEcGYEA8JtPxP0GRJ+IQkX262jM3dEIkza8ky5moIwUqYdsx0NxHgRRhORT
8c8hAuRBb2G82so8vUHK/fur85OEfc9TncnCY2crpogsgghifKLxrLgtT+gDpf2nx
SatLdt8GfQ85yA7hnWWJ2MxP3NaesDm75Lsm+tBbAiyC9P2jGRNtMSkCgYEApHd
HCctNi/FwjulhttFx/rHYKhLidZDFYeiE/v45bN4yFm8x7R/b0iE7KaszX+Exdvt
SghaTdcG0KnywlpbJVyusavPzpaJMjdJ6tcPhVAbAjm7enCIvGC8x+X3158iWg0A
R57hUglezIvVjv3aGwHwv1ZvtzK6zV6oXFAu0ECgYAbj046T4hyP5tJi93V5Hdi
Ttik7xRVxUl+iU7rWkGAXFpMLFteQEsRr7PJ/lemmEY5eTDAFmLy9FL2m9oQWCg
R8VdwsK8r9FGLS+9akcV5PI/WEKlwgXinB3OhYimtIG2Cg5JCqIZFHXD6MjEGoiu
L8ktHMPvodBwnsSbULpG0QKBgBaplTfC1HOnWiMGOU3KFPwYwT0O6CdTkmvOmL8Ni
blh9elyZ9FsGxsgtREBXRsqXuz7wtsQAqLHxbdlq/ZJQ7YfzOKU4ZxEnabvXnvWkU
YodjHdSoOkvDQNWu6ucyLRAWFuISeXw9a/9p7ftpxm0TSgyvmfLF2MIAEwyZRqam
77pBAoGAMmjmIjdjp+Ez8duyn3ieo36yrttF5NSsJLAbxPpdlc1gvtGCWW+9Cq0b
dxviW8+TFVEBl104f7HvM6EpTscdDxU+bCXWkfjuRb7Dy9Gott9JP8X8MBTakh3
vBgysi/sN3RqRBcGU40fOoZyFAMT8s1m/uYv52O6IgeuZ/ujbjY=
-----END RSA PRIVATE KEY-----
```

Using hit and trial, we find the port in which we can get the credential, in this case we got it in form of a private key

Using the private key we can login to bandit17 and in case you need the password we can extract it from there itself

password bandit17 after logging in using private key using

cat /etc/bandit\_pass/bandit17 is:

“VwOSWtCA7lRkktfbr2IDh6awj9RNZM5e”

```
bandit17@bandit:~$ cat /etc/bandit_pass/bandit17
VwOSWtCA7lRkktfbr2IDh6awj9RNZM5e
bandit17@bandit:~$
```

## Lvl 17->18

```
bandit17@bandit:~$ man diff
bandit17@bandit:~$ diff passwords.old passwords.new
42c42
< p6ggwdNHncnmCNxuAt0KtKVq185ZU7AW
---
> hga5tuuCLF6fFzUpnagiMN8ssu9LFrdg
bandit17@bandit:~$
```

In this lvl given 2 files passwords.old and passwords.new we will use diff command in order to retrieve them

the passwords we obtain are

“p6ggwdNHncnmCNxuAt0KtKVq185ZU7AW”

“hga5tuuCLF6fFzUpnagiMN8ssu9LFrdg”

NOTE: Can't login using either password after this step

## Lvl 18->19

[Since I was not able to retrieve the pass for bandit18 I can't continue just now till the task specified I'll do it as soon as possible and update it on github]