

NAME: JAMMI MOKSHA TEJ ROLL NO:21023 (CSE~A) TASK: COGNIZANCE (TASK ~7)

# Read the instructions given on the OverTheWire website properly and then find whatever is needed to proceed to the next levels. You have to complete up to level 15. Submit us a PROPER PDF document of the passwords you found along with the screenshots of the passwords.

# The goal of this level is for you to log into the game using SSH. The host you need to connect to is bandit.labs.overthewire.org, on port 2220.

#### # level $0 \rightarrow$ level 1

The username is bandit0 and the password is bandit0

The password for the next level is stored in a file called readme located in the home directory. Use this password to log into bandit1 using SSH.

moksha@moksha:~\$ ssh bandito@bandit.labs.overthewire.org -p 2220
This is a OverTheWire game server. More information on http://www.overthewire.org/wargames
bandito@bandit.labs.overthewire.org's password:

bandit0@bandit:~\$ ls
readme
bandit0@bandit:~\$ cat readme
boJ9jbbUNNfktd7800psq0ltutMc3MY1
bandit0@bandit:~\$

Password for opening level-1 is "boJ9jbbUNNfktd78OOpsqOltutMc3MY1".

Then we have to exit from bandit0

## Level $1 \rightarrow \text{Level } 2$

The password for the next level is stored in a file called - located in the home directory

```
moksha@moksha:~$ ssh bandit1@bandit.labs.overthewire.org -p 2220
This is a OverTheWire game server. More information on http://www.overthewire.org/wargames
```

Password for opening level-2 is "CV1DtqXWVFXTvM2F0k09SHz0YwRINYA9".

### Level $2 \rightarrow \text{Level } 3$

The password for the next level is stored in a file called spaces in this filename located in the home directory

```
moksha@moksha:~$ ssh bandit2@bandit.labs.overthewire.org -p 2220
This is a OverTheWire game server. More information on http://www.overthewire.org/wargames
```

```
bandit2@bandit:~$ ls
spaces in this filename
bandit2@bandit:~$ cat spaces\ in\ this\ filename
UmHadQclWmgdLOKQ3YNgjWxGoRMb5luK
bandit2@bandit:~$
```

Password for opening level-3 is "UmHadQclWmgdLOKQ3YNgjWxGoRMb5luK".

# Level $3 \rightarrow$ Level 4

The password for the next level is stored in a hidden file in the inhere directory.

moksha@moksha:~\$ ssh bandit3@bandit.labs.overthewire.org -p 2220
This is a OverTheWire game server. More information on http://www.overthewire.org/wargames

```
bandit3@bandit:~$ ls
inhere
bandit3@bandit:~$ cd inhere
bandit3@bandit:~/inhere$ ls
bandit3@bandit:~/inhere$ ls -a
. . . .hidden
bandit3@bandit:~/inhere$ cat .hidden
pIwrPrtPN36QITSp3EQaw936yaFoFgAB
bandit3@bandit:~/inhere$
```

Password for opening level-4 is "pIwrPrtPN36QITSp3EQaw936yaFoFgAB".

#### Level $4 \rightarrow \text{Level } 5$

The password for the next level is stored in the only human-readable file in the inhere directory.

```
moksha@moksha:~$ ssh bandit4@bandit.labs.overthewire.org -p 2220
This is a OverTheWire game server. More information on http://www.overthewire.org/wargames
```

```
bandit4@bandit:~$ ls
bandit4@bandit:~$ cd inhere
bandit4@bandit:~/inhere$ ls
-file00 -file01 -file02 -file03 -file04 -file05 -file06 -file07 -file08 -file09
bandit4@bandit:~/inhere$ file ./-*
./-file00: data
./-file01: data
./-file02: data
./-file03: data
./-file04: data
./-file05: data
./-file06: data
./-file07: ASCII text
./-file08: data
./-file09: data
bandit4@bandit:~/inhere$ cat ./-file07
koReBOKuIDDepwhWk7jZC0RTdopnAYKh
bandit4@bandit:~/inhere$
```

Password for opening level-5 is "koReBOKuIDDepwhWk7jZCORTdopnAYKh".

### Level $5 \rightarrow \text{Level } 6$

The password for the next level is stored in a file somewhere under the inhere directory and has all of the following properties:

human-readable,1033 bytes in size,not executable

```
moksha@moksha:~$ ssh bandit5@bandit.labs.overthewire.org -p 2220
This is a OverTheWire game server. More information on http://www.overthewire.org/wargames
```

```
bandits@bandit:-$ ls
inhere
bandits@bandit:-\finhere$ ls
maybehere00 maybehere02 maybehere04 maybehere06 maybehere08 maybehere10 maybehere12 maybehere14 maybehere16 maybehere18
maybehere01 maybehere03 maybehere05 maybehere07 maybehere09 maybehere11 maybehere13 maybehere15 maybehere17 maybehere19
./maybehere07/.file2
bandits@bandit:-/inhere$ cat ./maybehere07/.file2
DXjZPULLxYr17uwoI01bNLObtFemEgo7

bandit:~/inhere$
```

Password for opening level-6 is "DXjZPULLxYr17uwoI01bNLQbtFemEgo7".

# Level $6 \rightarrow \text{Level } 7$

The password for the next level is stored somewhere on the server and has all of the following properties:

owned by user bandit7, owned by group bandit6,33 bytes in size

```
moksha@moksha:~$ ssh bandit6@bandit.labs.overthewire.org -p 2220
This is a OverTheWire game server. More information on http://www.overthewire.org/wargames
```

```
bandit6@bandit:-$ find / -type f -user bandit7 -group bandit6 -size 33c find: '/root': Permission denied find: '/home/bandit28-git': Permission denied find: '/home/bandit28-git': Permission denied find: '/home/bandit5/inhere': Permission denied find: '/home/bandit27-git': Permission denied find: '/home/bandit27-git': Permission denied find: '/home/bandit29-git': Permission denied find: '/lost-found': Permission denied find: '/etc/polkit-1/localauthority': Permission denied find: '/etc/polkit-1/localauthority': Permission denied find: '/etc/low/backup': Permission denied find: '/etc/low/backup': Permission denied find: '/proc/tzy/driver': Permission denied find: '/proc/tzy/driver': Permission denied find: '/proc/tzy31/task/12831/fdinfo/6': No such file or directory find: '/proc/12831/task/12831/fdinfo/6': No such file or directory find: '/run/screen/5-bandit10': Permission denied find: '/run/screen/5-bandit10': Permission denied find: '/run/screen/5-bandit20': Permission denied find: '/run/screen/5-bandit26': Permission denied find: '/run/screen/5-bandit26': Permission denied find: '/run/screen/5-bandit31': Permission denied find: '/run/screen/5-bandit31': Permission denied find: '/run/screen/5-bandit31': Permission denied find: '/run/screen
```

```
find: '/run/screen/S-bandit17': Permission denied find: '/run/screen/S-bandit2': Permission denied find: '/run/screen/S-bandit22': Permission denied find: '/run/screen/S-bandit21': Permission denied find: '/run/screen/S-bandit14': Permission denied find: '/run/screen/S-bandit13': Permission denied find: '/run/screen/S-bandit24': Permission denied find: '/run/screen/S-bandit23': Permission denied find: '/run/screen/S-bandit23': Permission denied find: '/run/shm': Permission denied find: '/run/lock/lvm': Permission denied find: '/var/spool/bandit24': Permission denied find: '/var/spool/cron/crontabs': Permission denied find: '/var/spool/rsyslog': Permission denied find: '/var/tmp': Permission denied find: '/var/lib/apt/lists/partial': Permission denied find: '/var/lib/polkit-1': Permission denied /var/lib/dpkg/info/bandit7.password find: '/var/cache/apt/archives/partial': Permission denied find: '/var/cache/ldconfig': Permission denied bandit6@bandit:~$ cat /var/lib/dpkg/info/bandit7.password HKBPTKQnIay4Fw76bEy8PVxKEDQRKTZs bandit6@bandit:~$
```

Password for opening level-7 is "HKBPTKQnIay4Fw76bEy8PVxKEDQRKTzs".

## Level 7 → Level 8

The password for the next level is stored in the file data.txt next to the word millionth

```
moksha@moksha:~$ ssh bandit7@bandit.labs.overthewire.org -p 2220
This is a OverTheWire game server. More information on http://www.overthewire.org/wargames
```

Password for opening level-8 is "cvX2JJa4CFALtqS87jk27qwqGhBM9plV".

## Level $8 \rightarrow \text{Level } 9$

The password for the next level is stored in the file data.txt and is the only line of text that occurs only once

```
moksha@moksha:~$ ssh bandit8@bandit.labs.overthewire.org -p 2220
This is a OverTheWire game server. More information on http://www.overthewire.org/wargames
```

```
bandit8@bandit:~$ ls
data.txt
bandit8@bandit:~$ cat data.txt | sort | uniq -u
UsvVyFSfZZWbi6wgC7dAFyFuR6jQQUhR
bandit8@bandit:~$
```

Password for opening level-9 is "UsvVyFSfZZWbi6wgC7dAFyFuR6jQQUhR".

### Level $9 \rightarrow \text{Level } 10$

The password for the next level is stored in the file data.txt in one of the few human-readable strings, preceded by several '=' characters.

```
moksha@moksha:~$ ssh bandit9@bandit.labs.overthewire.org -p 2220
This is a OverTheWire game server. More information on http://www.overthewire.org/wargames
```

```
bandit9@bandit:~$ ls
data.txt
bandit9@bandit:~$ strings data.txt | grep "="
========== the*2i"4
=:G e
======== password
<I=zsGi
Z)======== is
A=|t&E
Zdb=
C^ LAh=3G
*SF=s
&========= truKLdjsbJ5g7yyJ2X2R0o3a5HQJFuLk
S=A.H&^</pre>
```

Password for opening level-10 is "truKLdjsbJ5g7yyJ2X2R0o3a5HQJFuLk".

# <u>Level 10 → Level 11</u>

The password for the next level is stored in the file data.txt, which contains base64 encoded data

moksha@moksha:~\$ ssh bandit10@bandit.labs.overthewire.org -p 2220
This is a OverTheWire game server. More information on http://www.overthewire.org/wargames

```
bandit10@bandit:~$ ls
data.txt
bandit10@bandit:~$ cat data.txt
VGhliHBhc3N3b3JkIGlzIElGdWt3S0dzRlc4TU9xM0lSRnFyeEUxaHhUTkViVVBSCg==
bandit10@bandit:~$ echo VGhlIHBhc3N3b3JkIGlzIElGdWt3S0dzRlc4TU9xM0lSRnFyeEUxaHhUTkViVVBSCg==
VGhlIHBhc3N3b3JkIGlzIElGdWt3S0dzRlc4TU9xM0lSRnFyeEUxaHhUTkViVVBSCg==
bandit10@bandit:~$ echo VGhlIHBhc3N3b3JkIGlzIElGdWt3S0dzRlc4TU9xM0lSRnFyeEUxaHhUTkViVVBSCg== | base64 --decode
The password is IFukwKGsFW8M0q3IRFqrxE1hxTNEbUPR
```

Password for opening level-11 is "IFukwKGsFW8MOq3IRFqrxE1hxTNEbUPR".

## Level $11 \rightarrow \text{Level } 12$

The password for the next level is stored in the file data.txt, where all lowercase (a-z) and uppercase (A-Z) letters have been rotated by 13 positions

```
moksha@moksha:~$ ssh bandit11@bandit.labs.overthewire.org -p 2220
This is a OverTheWire game server. More information on http://www.overthewire.org/wargames
```

```
bandit11@bandit:~$ ls
data.txt
bandit11@bandit:~$ cat data.txt
Gur cnffjbeq vf 5Gr8L4qetPEsPk8htqjhRK8XSP6x2RHh
bandit11@bandit:~$ cat data.txt | tr "A-Za-z" "N-ZA-Mn-za-m"
The password is 5Te8Y4drgCRfCx8ugdwuEX8KFC6k2EUu
bandit11@bandit:~$
```

Password for opening level-12 is "5Te8Y4drgCRfCx8ugdwuEX8KFC6k2EUu".

#### Level $12 \rightarrow$ Level 13

The password for the next level is stored in the file data.txt, which is a hex dump of a file that has been repeatedly compressed. For this level, it may be useful to create a directory under /tmp in which you can work using mkdir.

**Hint:** mkdir /tmp/myname123. Then copy the datafile using cp, and rename it using mv

```
moksha@moksha:~$ ssh bandit12@bandit.labs.overthewire.org -p 2220
This is a OverTheWire game server. More information on http://www.overthewire.org/wargames
```

```
2@bandit:~$ ls
         data.txt
            data.txt
bandit12@bandit:~$ cp data.txt /tmp/mokshatej
bandit12@bandit:~$ cd /tmp/mokshatej
bandit12@bandit:/tmp/mokshatej$ ls
data.txt
bandtt12@bandtt:/tmp/mokshatej$ file data.txt
data.txt: ASCII text
bandtt12@bandtt:/tmp/mokshatej$ cat data.txt
000000000: 1f8b 0808 0650 b45e 0203 6461 7461 322e
00000010: 6269 6e00 013d 02c2 fd42 5a68 3931 4159 bin.=_BZh91AV
00000020: 2653 598e 4f1c c800 001e 7fff fbfp 7fda 85Y.O....
00000030: 9e7f 4f76 9fcf fe7d 3fff f67d abde 5e9f ...Ov.}?..}..
00000040: f3fe 9fbf f6f1 feee bfdf a3ff b001 3b1b ...
0000050: 5481 a1a0 lea0 1a34 d0d0 001a 68d3 4683 T...4.h.F.
000000070: a000 c87a 81a3 464d 483d 3455 1068 0346 ...Z.FM.C.h.F.
00000080: 8340 0680 0034 1918 4c4d 190c 4000 0001 F...4.LM..@..
000000070: a000 c87a 81a3 464d 883d 3455 1068 0346 ...Z.FM.C.h.F.
00000080: 8340 6606 800 680 0680 0644 f500 ...C.4...
00000000: 5600 4680 0650 68f2 4d00 6800 0660 0190 ...
00000000: 5600 3406 2340 034d 3400 0000 3403 d400 .....M.H.h.h...
00000000: 1a07 a832 3400 f51a 0003 43d4 0068 0d34 .....M.H.h...
0000000c0: 1a07 a832 3400 f51a 0003 43d4 0068 0d34 .....M.H.h...
0000000c0: 1a07 a832 3400 f51a 0003 43d4 0068 0d34 ...
000000c0: 1a07 a832 3400 f51a 0003 43d4 0068 0d34 ...
000000c0: 1a07 a832 3400 f51a 0003 43d4 0068 0d34 ...
000000c0: 1a07 a832 3400 f51a 0003 43d4 0068 0d34 ...
000000c0: 1a07 a832 3400 f51a 0003 43d4 0068 0d34 ...
000000c0: 1a07 a832 3400 f51a 0003 43d4 0068 0d34 ...
000000c0: 1a07 a832 3400 f51a 0003 43d4 0068 0d34 ...
000000c0: 1a07 a832 3400 f51a 0003 43d4 0068 0d34 ...
00000160: d616 55cc 2ef2 94d6 e7d1 3050 b5fb 76eb ...
00000160: d616 55cc 2ef2 94d6 e7d1 3050 b5fb 76eb ...
00000160: d616 55cc 2ef2 9d46 e7d1 3050 b5fb 76eb ...
00000160: d616 55cc 2ef2 9d46 e7d1 3050 b5fb 76eb ...
00000160: d646 b662 1158 3f9e 897a 8cae 32b0 1fb7 ...
00000160: d646 b662 1158 3f9e 897a 8cae 32b0 1fb7 ...
00000160: d646 b662 1158 3f9e 897a 8cae 32b0 1fb7 ...
00000160: d646 b662 1758 8d50 d675 8d57 8d50 d675 8d50 d675 ...
00000160: d646 866 8d50 d675 
         bandit:/bmp/mokshatej$ file data.txt
data.txt: ASCII text
         bandit12@bandit:/tmp/mokshatej$ gzip -d task.gz
bandit12@bandit:/tmp/mokshatej$ file task
```

```
bandit12@bandit:/tmp/mokshatej$ xxd -r data.txt task
bandit12@bandit:/tmp/mokshatej$ file task
task: gzip compressed data, was "data2.bin", last modified: Thu May 7 18:14:30 2020, max compression, from Unix
bandit12@bandit:/tmp/mokshatej$ mv task task.gz
task: bzip2 compressed data, block size = 900k
bandit12@bandit:/tmp/mokshatej$ mv task task.bz2
```

bandit12@bandit:/tmp/mokshatej\$ mv task task.gz bandit12@bandit:/tmp/mokshatej\$ gzip -d task.gz bandit12@bandit:/tmp/mokshatej\$ ls data.txt moksha.gz task
bandit12@bandit:/tmp/mokshatej\$ file task task task: POSIX tar archive (GNU)

```
bandit12@bandit:/tmp/mokshatej$ mv task task.tar
bandit12@bandit:/tmp/mokshatej$ tar -x -f task.tar
  bandit12@bandit:/tmp/mokshatej$ ls
data5.bin data.txt moksha.gz task.tar
bandit12@bandit:/tmp/mokshatej$ file data5.bin
data5.bin: POSIX tar archive (GNU)
bandit12@bandit:/tmp/mokshatej$ mv data5.bin data5.tar
bandit12@bandit:/tmp/mokshatej$ tar -x -f data5.tar
 bandit12@bandit:/tmp/mokshatej$ ls
 data5.tar data6.bin data.txt moksha.gz tasl
bandit12@bandit:/tmp/mokshatej$ file data6.bin
data6.bin: bzip2 compressed data, block size = 900k
bandit12@bandit:/tmp/mokshatej$ mv data6.bin data6.tar
bandit12@bandit:/tmp/mokshatej$ tar -x -f data6.tar
 bandit12@bandit:/tmp/mokshatej$ ls
data5.tar data6.tar data8.bin data.txt moksha.gz task.tar
bandit12@bandit:/tmp/mokshatej$ file data8.bin
data8.bin: gzip compressed data, was "data9.bin", last modified: Thu May 7 18:14:30 2020, max compression, from Unix
```

```
bandit12@bandit:/tmp/mokshatej$ mv data8.bin data8.gz
bandit12@bandit:/tmp/mokshatej$ gzip -d data8.gz
bandit12@bandit:/tmp/mokshatej$ file data8
data8: ASCII text
```

Password for opening level-13 is "8ZjyCRiBWFYkneahHwxCv3wb2a1ORpYL".

## Level $13 \rightarrow \text{Level } 14$

The password for the next level is stored in /etc/bandit\_pass/bandit14 and can only be read by user bandit14. For this level, you don't get the next password, but you get a private SSH key that can be used to log into the next level. Note: localhost is a hostname that refers to the machine you are working on.

```
moksha@moksha:~$ ssh bandit13@bandit.labs.overthewire.org -p 2220
This is a OverTheWire game server. More information on http://www.overthewire.org/wargames
```

```
bandit13@bandit:~$ ls
sshkey.private
bandit13@bandit:~$ ssh -i sshkey.private bandit14@localhost
Could not create directory '/home/bandit13/.ssh'.
The authenticity of host 'localhost (127.0.0.1)' can't be established.
ECDSA key fingerprint is SHA256:98ULOZWr85496EtCRkKlo20X30PnyPSB5tB5RPbhczc.
Are you sure you want to continue connecting (yes/no)? yes
Failed to add the host to the list of known hosts (/home/bandit13/.ssh/known_hosts).
This is a OverTheWire game server. More information on http://www.overthewire.org/wargames
```

```
bandit14@bandit:~$ cat /etc/bandit_pass/bandit14
4wcYUJFw0k0XLShlDzztnTBHiqxU3b3e
```

Password for opening level-14 is "4wcYUJFw0k0XLShlDzztnTBHiqxU3b3e".

### Level $14 \rightarrow$ Level 15

The password for the next level can be retrieved by submitting the password of the current level to port 30000 on localhost.

```
moksha@moksha:~$ ssh bandit14@bandit.labs.overthewire.org -p 2220
This is a OverTheWire game server. More information on http://www.overthewire.org/wargames
```

```
bandit14@bandit:~$ telnet localhost 30000
Trying 127.0.0.1...
Connected to localhost.
Escape character is '^]'.
4wcYUJFw0k0XLShlDzztnTBHiqxU3b3e
Correct!
BfMYroe26WYalil77FoDi9qh59eK5xNr
Connection closed by foreign host.
```

Password for opening level-15 is "BfMYroe26WYalil77FoDi9qh59eK5xNr".

# Level 15 → Level 16

The password for the next level can be retrieved by submitting the password of the current level to **port 30000 on localhost** 

moksha@moksha:~\$ ssh bandit15@bandit.labs.overthewire.org -p 2220
This is a OverTheWire game server. More information on http://www.overthewire.org/wargames

```
bandt15gbandt::-$ ls
bandt15gbandt::-$ cat /etc/bandit pass/bandt15
BFMYro2eOWYail17Fob19gh59eKSxNr
bandt15gbandt::-$ man ncat | grep ssl
--ssl --ssl
```

Password for opening level~16 is "cluFn7wTiGryunymYOu4RcffSxQluehd"