OVERTHEWIRE BANDIT WALKTHROUGH

BANDIT LEVEL 0 → LEVEL 1

Login to Bandit Server

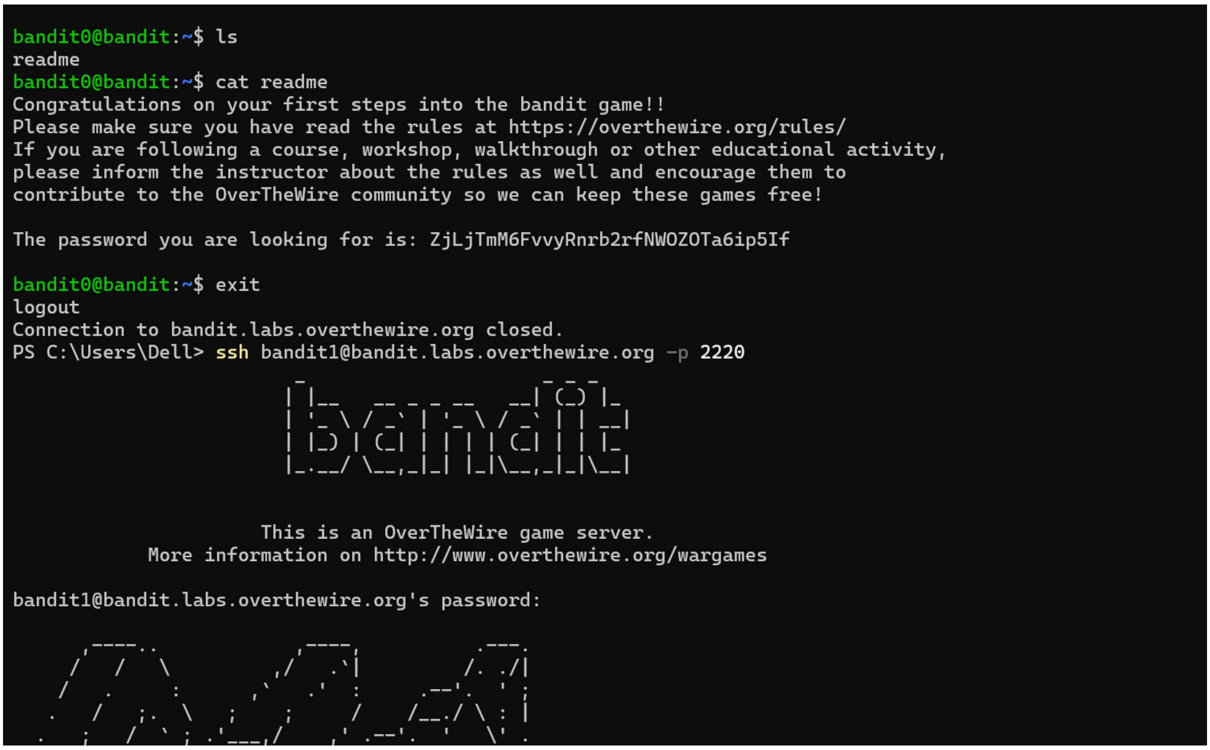
The Bandit challenge begins with logging into the remote server using SSH (Secure Shell). SSH is a protocol for securely accessing remote machine.

Task:

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. Whenever you find a password for a level, use SSH (on port 2220) to log into that level and continue the game.

Use SSH to connect:

ssh bandit0@bandit.labs.overthewire.org -p 2220



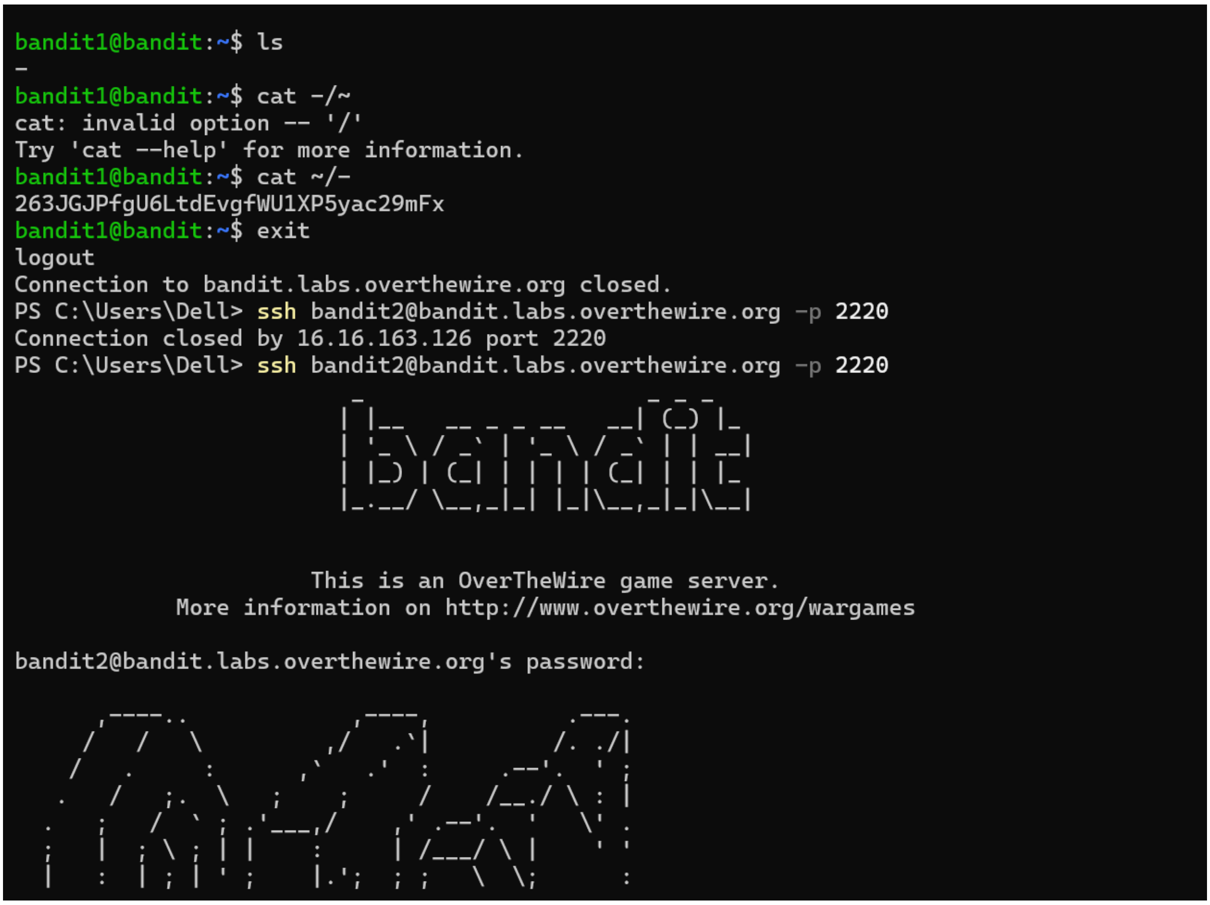
```
bandit0@bandit:~$ ls
readme
bandit0@bandit:~$ cat readme
Congratulations on your first steps into the bandit game!!
Please make sure you have read the rules at https://overthewire.org/rules/
If you are following a course, workshop, walkthrough or other educational activity,
please inform the instructor about the rules as well and encourage them to
contribute to the OverTheWire community so we can keep these games free!

The password you are looking for is: ZjLjTmM6FvvyRnrb2rfNWOZOTa6ip5If

bandit0@bandit:~$ exit
logout
Connection to bandit.labs.overthewire.org closed.
PS C:\Users\Dell> ssh bandit1@bandit.labs.overthewire.org -p 2220
                         _                     _ _ _
                        | |__   __ _ _ __   __| (_) |_
                        | '_ \ / _` | '_ \ / _` | | __|
                        | |_) | (_| | | | | (_| | | |_
                        |_.__/ \__,_|_| |_|\__,_|_|\__|


                      This is an OverTheWire game server.
            More information on http://www.overthewire.org/wargames

bandit1@bandit.labs.overthewire.org's password:

      ,----..            ,----,          .---.
     /   /   \         ,/   .`|         /. ./|
    /   .     :      ,`   .'  :     .--'.  ' ;
   .   /   ;.  \   ;    ;     /    /__./ \ : |
  .   ;   /  ` ; .'___,/    ,' .--'.  '   \' .
```

BANDIT LEVEL 1 → LEVEL 2

Task:

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

Files with special characters like - can cause issues when executing commands. Prefixing with ./ tells the system it's a file, not an argument.



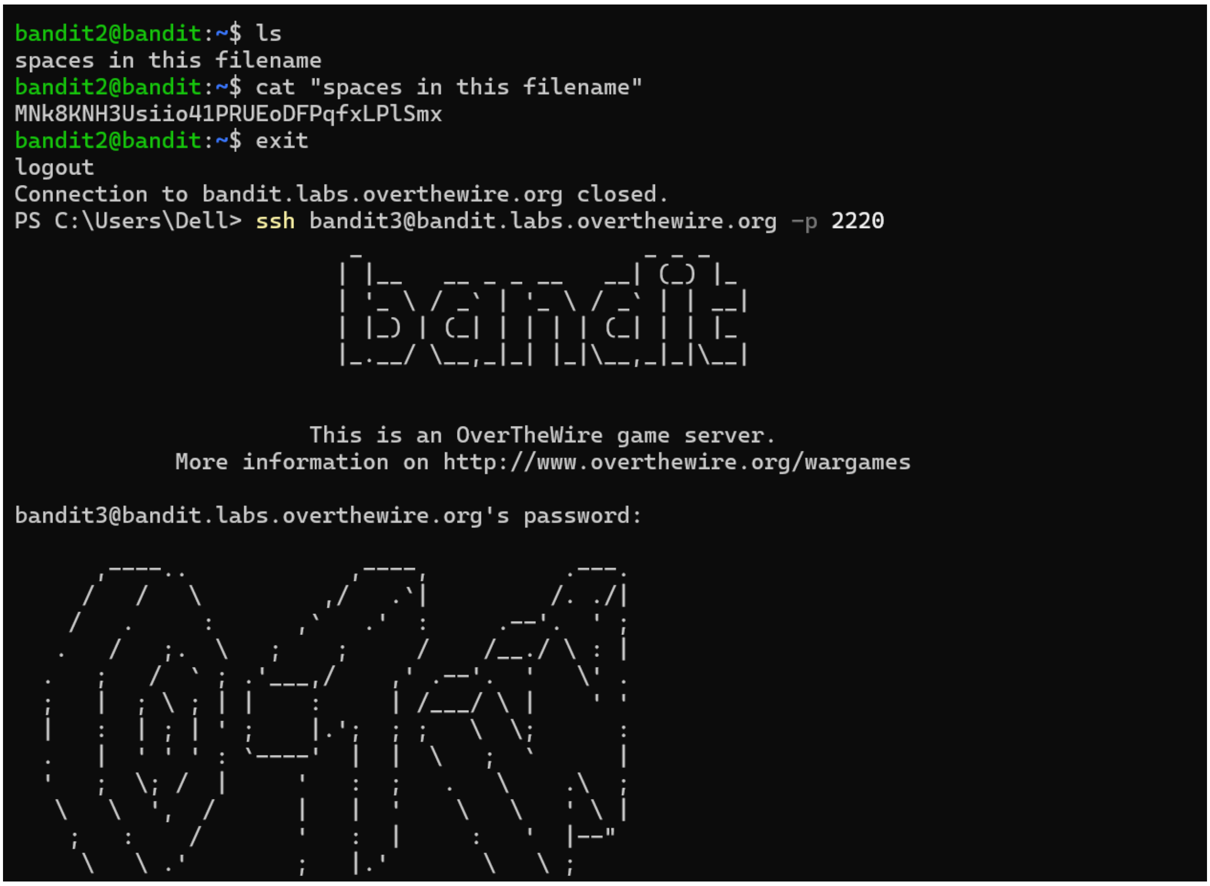
```
bandit1@bandit:~$ ls
-
bandit1@bandit:~$ cat -/~
cat: invalid option -- '/'
Try 'cat --help' for more information.
bandit1@bandit:~$ cat ~/-
263JGJPfgU6LtdEvgfWU1XP5yac29mFx
bandit1@bandit:~$ exit
logout
Connection to bandit.labs.overthewire.org closed.
PS C:\Users\Dell> ssh bandit2@bandit.labs.overthewire.org -p 2220
Connection closed by 16.16.163.126 port 2220
PS C:\Users\Dell> ssh bandit2@bandit.labs.overthewire.org -p 2220
                         _                     _ _ _
                        | |__   __ _ _ __   __| (_) |_
                        | '_ \ / _` | '_ \ / _` | | __|
                        | |_) | (_| | | | | (_| | | |_
                        |_.__/ \__,_|_| |_|\__,_|_|\__|


                      This is an OverTheWire game server.
            More information on http://www.overthewire.org/wargames

bandit2@bandit.labs.overthewire.org's password:

      ,----..            ,----,          .---.
     /   /   \         ,/   .`|         /. ./|
    /   .     :      ,`   .'  :     .--'.  ' ;
   .   /   ;.  \   ;    ;     /    /__./ \ : |
  .   ;   /  ` ; .'___,/    ,' .--'.  '   \' .
  ;   |  ; \ ; | |    :     | /___/ \ |    ' '
  |   :  | ; | ' ;    |.';  ; ;   \  \;      :
```

BANDIT LEVEL 2 → LEVEL 3

Task:

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

Files with spaces in names require quotes or escape characters (\).



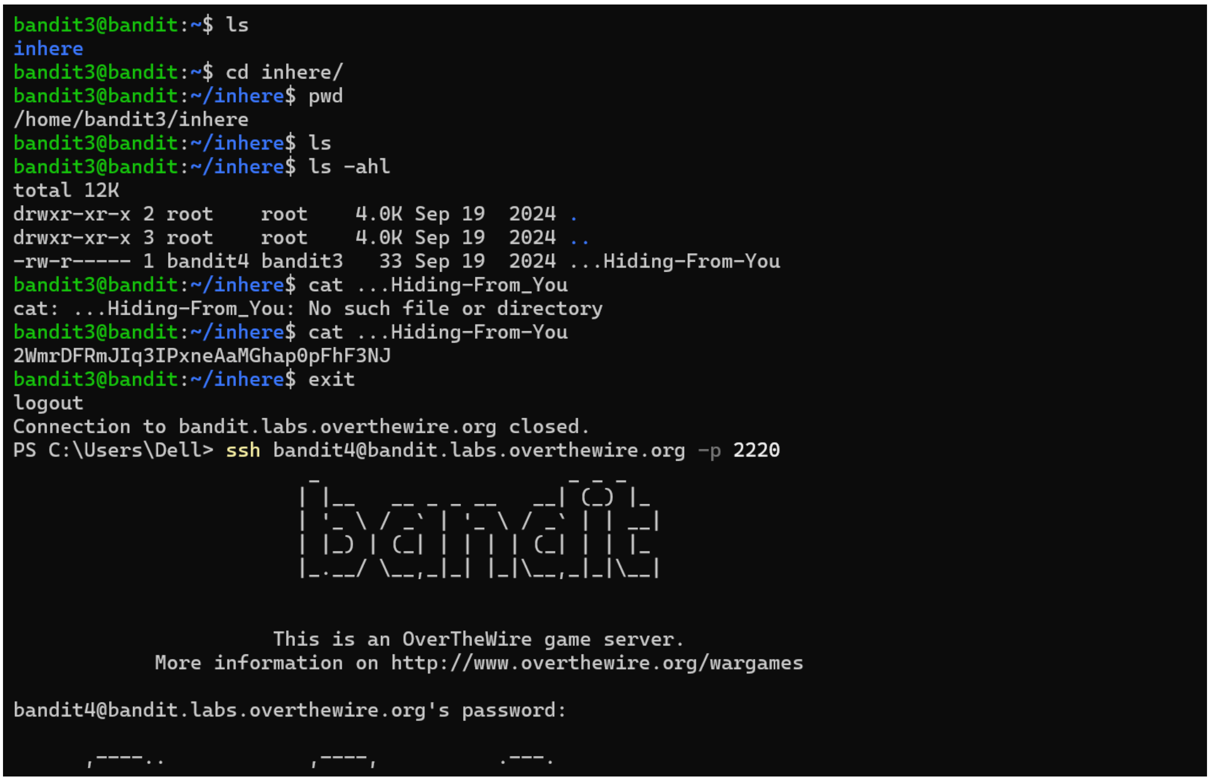
```
bandit2@bandit:~$ ls
spaces in this filename
bandit2@bandit:~$ cat "spaces in this filename"
MNk8KNH3Usiio41PRUEoDFPqfxLPlSmx
bandit2@bandit:~$ exit
logout
Connection to bandit.labs.overthewire.org closed.
PS C:\Users\Dell> ssh bandit3@bandit.labs.overthewire.org -p 2220
                         _                     _ _ _
                        | |__   __ _ _ __   __| (_) |_
                        | '_ \ / _` | '_ \ / _` | | __|
                        | |_) | (_| | | | | (_| | | |_
                        |_.__/ \__,_|_| |_|\__,_|_|\__|


                      This is an OverTheWire game server.
            More information on http://www.overthewire.org/wargames

bandit3@bandit.labs.overthewire.org's password:

      ,----..            ,----,          .---.
     /   /   \         ,/   .`|         /. ./|
    /   .     :      ,`   .'  :     .--'.  ' ;
   .   /   ;.  \   ;    ;     /    /__./ \ : |
  .   ;   /  ` ; .'___,/    ,' .--'.  '   \' .
  ;   |  ; \ ; | |    :     | /___/ \ |    ' '
  |   :  | ; | ' ;    |.';  ; ;   \  \;      :
  .   |  ' ' ' : `____'  |  |  \   ;  `      |
  '   ;  \; /  |     '   :  ;   .   \    .\  ;
   \   \  ', /      |   |  '    \   \   ' \ |
    ;   :   /       '   :  |     :   '  |--"
     \   \ .'        ;   |.'       \   \ ;
```

BANDIT LEVEL 3 → LEVEL 4

Task:

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

Hidden files start with . and are not shown by default. ls -la reveals them.



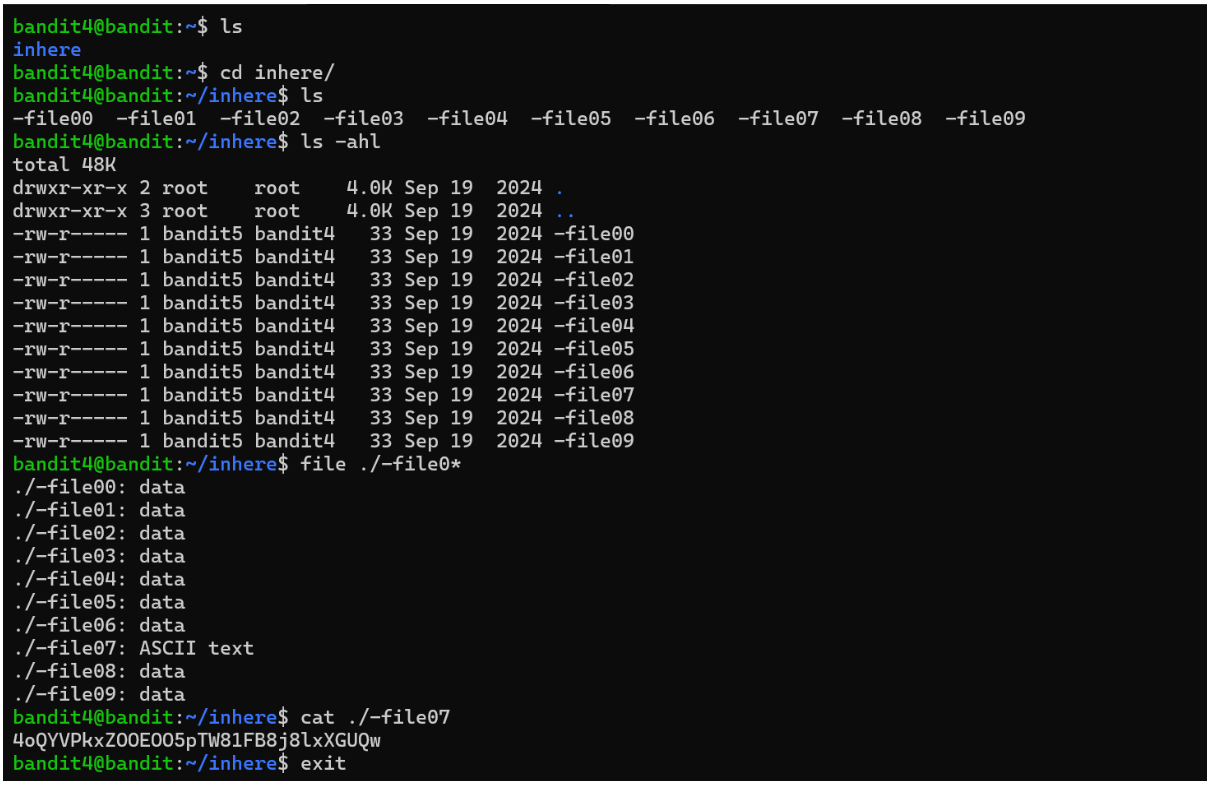
```
bandit3@bandit:~$ ls
inhere
bandit3@bandit:~$ cd inhere/
bandit3@bandit:~/inhere$ pwd
/home/bandit3/inhere
bandit3@bandit:~/inhere$ ls
bandit3@bandit:~/inhere$ ls -ahl
total 12K
drwxr-xr-x 2 root    root    4.0K Sep 19  2024 .
drwxr-xr-x 3 root    root    4.0K Sep 19  2024 ..
-rw-r----- 1 bandit4 bandit3   33 Sep 19  2024 ...Hiding-From-You
bandit3@bandit:~/inhere$ cat ...Hiding-From_You
cat: ...Hiding-From_You: No such file or directory
bandit3@bandit:~/inhere$ cat ...Hiding-From-You
2WmrDFRmJIq3IPxneAaMGhap0pFhF3NJ
bandit3@bandit:~/inhere$ exit
logout
Connection to bandit.labs.overthewire.org closed.
PS C:\Users\Dell> ssh bandit4@bandit.labs.overthewire.org -p 2220
                         _                     _ _ _
                        | |__   __ _ _ __   __| (_) |_
                        | '_ \ / _` | '_ \ / _` | | __|
                        | |_) | (_| | | | | (_| | | |_
                        |_.__/ \__,_|_| |_|\__,_|_|\__|


                      This is an OverTheWire game server.
            More information on http://www.overthewire.org/wargames

bandit4@bandit.labs.overthewire.org's password:

      ,----..            ,----,          .---.
```

BANDIT LEVEL 4 → LEVEL 5

Task:

The password for the next level is stored in the only human-readable file in the inhere directory. Tip: if your terminal is messed up, try the "reset" command.

The find command locates files based on criteria like size, type, or permissions.



```
bandit4@bandit:~$ ls
inhere
bandit4@bandit:~$ cd inhere/
bandit4@bandit:~/inhere$ ls
-file00  -file01  -file02  -file03  -file04  -file05  -file06  -file07  -file08  -file09
bandit4@bandit:~/inhere$ ls -ahl
total 48K
drwxr-xr-x 2 root    root    4.0K Sep 19  2024 .
drwxr-xr-x 3 root    root    4.0K Sep 19  2024 ..
-rw-r----- 1 bandit5 bandit4   33 Sep 19  2024 -file00
-rw-r----- 1 bandit5 bandit4   33 Sep 19  2024 -file01
-rw-r----- 1 bandit5 bandit4   33 Sep 19  2024 -file02
-rw-r----- 1 bandit5 bandit4   33 Sep 19  2024 -file03
-rw-r----- 1 bandit5 bandit4   33 Sep 19  2024 -file04
-rw-r----- 1 bandit5 bandit4   33 Sep 19  2024 -file05
-rw-r----- 1 bandit5 bandit4   33 Sep 19  2024 -file06
-rw-r----- 1 bandit5 bandit4   33 Sep 19  2024 -file07
-rw-r----- 1 bandit5 bandit4   33 Sep 19  2024 -file08
-rw-r----- 1 bandit5 bandit4   33 Sep 19  2024 -file09
bandit4@bandit:~/inhere$ file ./-file0*
./-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
4oQYVPkxZOOEOO5pTW81FB8j8lxXGUQw
bandit4@bandit:~/inhere$ exit
```

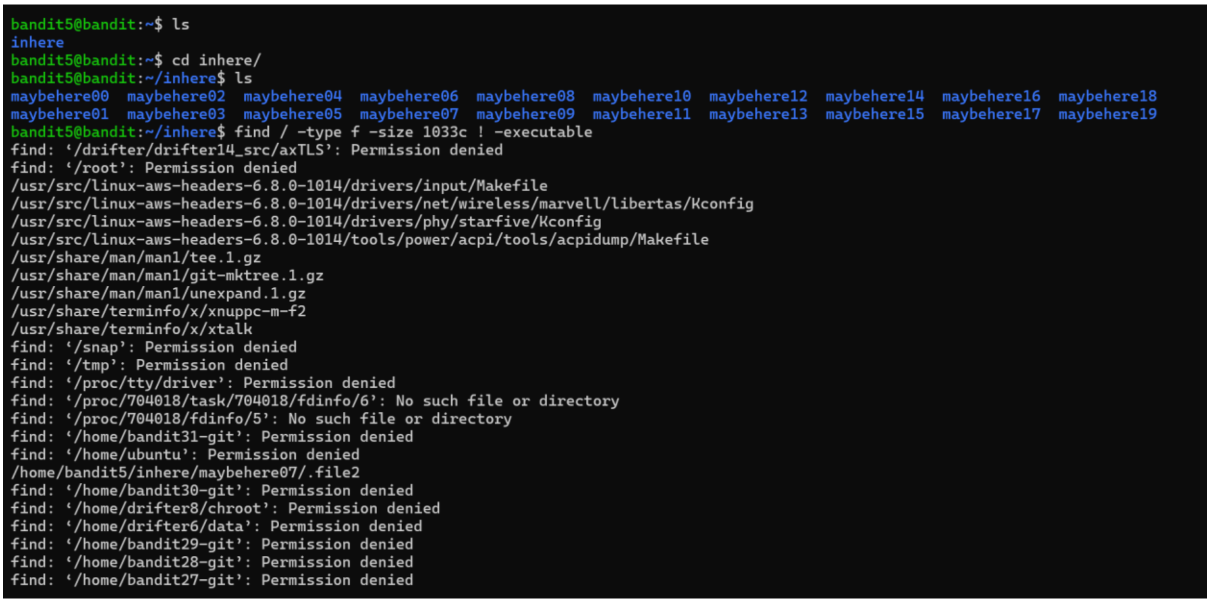
BANDIT LEVEL 5 → LEVEL 6

Task:

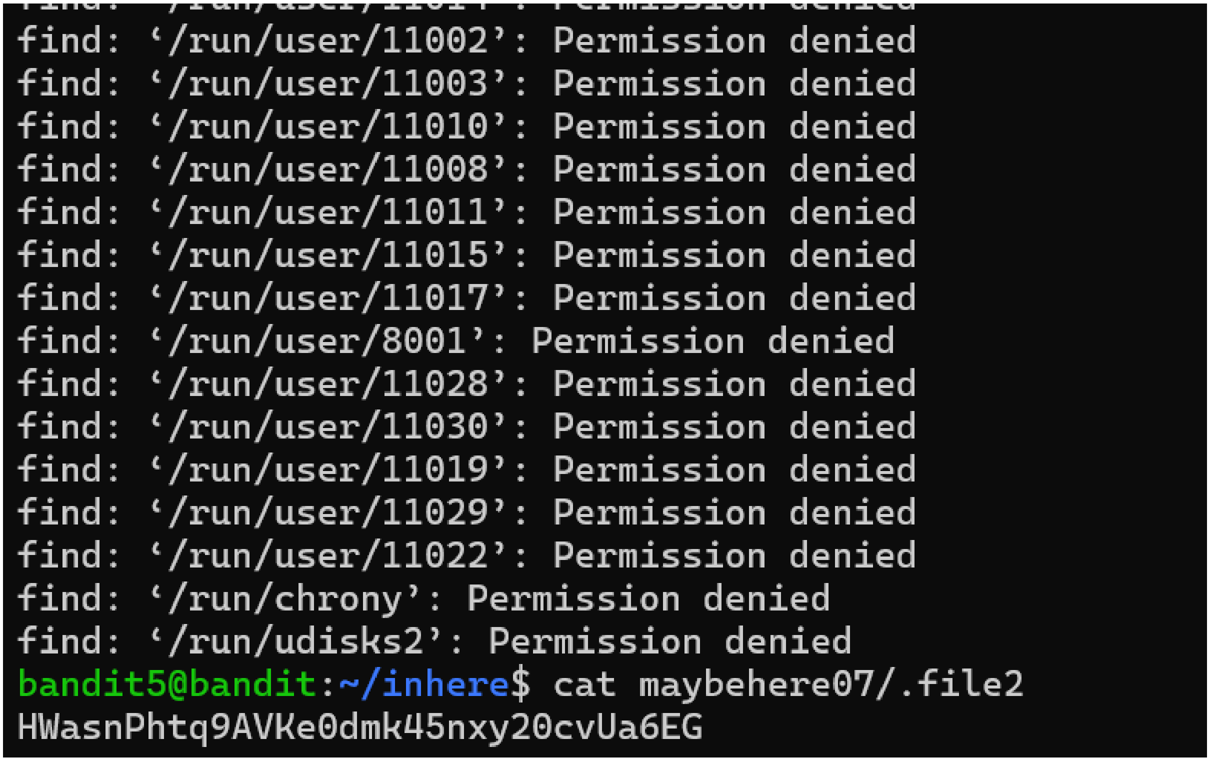
The password for the next level is stored in a file somewhere under the inhere directory and has all of the following properties:

- human-readable
- 1033 bytes in size
- not executable

Searching system-wide requires careful filtering. /dev/null suppresses permission errors.



```
bandit5@bandit:~$ ls
inhere
bandit5@bandit:~$ cd inhere/
bandit5@bandit:~/inhere$ ls
maybehere00  maybehere02  maybehere04  maybehere06  maybehere08  maybehere10  maybehere12  maybehere14  maybehere16  maybehere18
maybehere01  maybehere03  maybehere05  maybehere07  maybehere09  maybehere11  maybehere13  maybehere15  maybehere17  maybehere19
bandit5@bandit:~/inhere$ find / -type f -size 1033c ! -executable
find: '/drifter/drifter14_src/axTLS': Permission denied
find: '/root': Permission denied
/usr/src/linux-aws-headers-6.8.0-1014/drivers/input/Makefile
/usr/src/linux-aws-headers-6.8.0-1014/drivers/net/wireless/marvell/libertas/Kconfig
/usr/src/linux-aws-headers-6.8.0-1014/drivers/phy/starfive/Kconfig
/usr/src/linux-aws-headers-6.8.0-1014/tools/power/acpi/tools/acpidump/Makefile
/usr/share/man/man1/tee.1.gz
/usr/share/man/man1/git-mktree.1.gz
/usr/share/man/man1/unexpand.1.gz
/usr/share/terminfo/x/xnuppc-m-f2
/usr/share/terminfo/x/xtalk
find: '/snap': Permission denied
find: '/tmp': Permission denied
find: '/proc/tty/driver': Permission denied
find: '/proc/704018/task/704018/fdinfo/6': No such file or directory
find: '/proc/704018/fdinfo/5': No such file or directory
find: '/home/bandit31-git': Permission denied
find: '/home/ubuntu': Permission denied
/home/bandit5/inhere/maybehere07/.file2
find: '/home/bandit30-git': Permission denied
find: '/home/drifter8/chroot': Permission denied
find: '/home/drifter6/data': Permission denied
find: '/home/bandit29-git': Permission denied
find: '/home/bandit28-git': Permission denied
find: '/home/bandit27-git': Permission denied
```



```
find: '/run/user/11002': Permission denied
find: '/run/user/11003': Permission denied
find: '/run/user/11010': Permission denied
find: '/run/user/11008': Permission denied
find: '/run/user/11011': Permission denied
find: '/run/user/11015': Permission denied
find: '/run/user/11017': Permission denied
find: '/run/user/8001': Permission denied
find: '/run/user/11028': Permission denied
find: '/run/user/11030': Permission denied
find: '/run/user/11019': Permission denied
find: '/run/user/11029': Permission denied
find: '/run/user/11022': Permission denied
find: '/run/chrony': Permission denied
find: '/run/udisks2': Permission denied
bandit5@bandit:~/inhere$ cat maybehere07/.file2
HWasnPhtq9AVKe0dmk45nxy20cvUa6EG
```

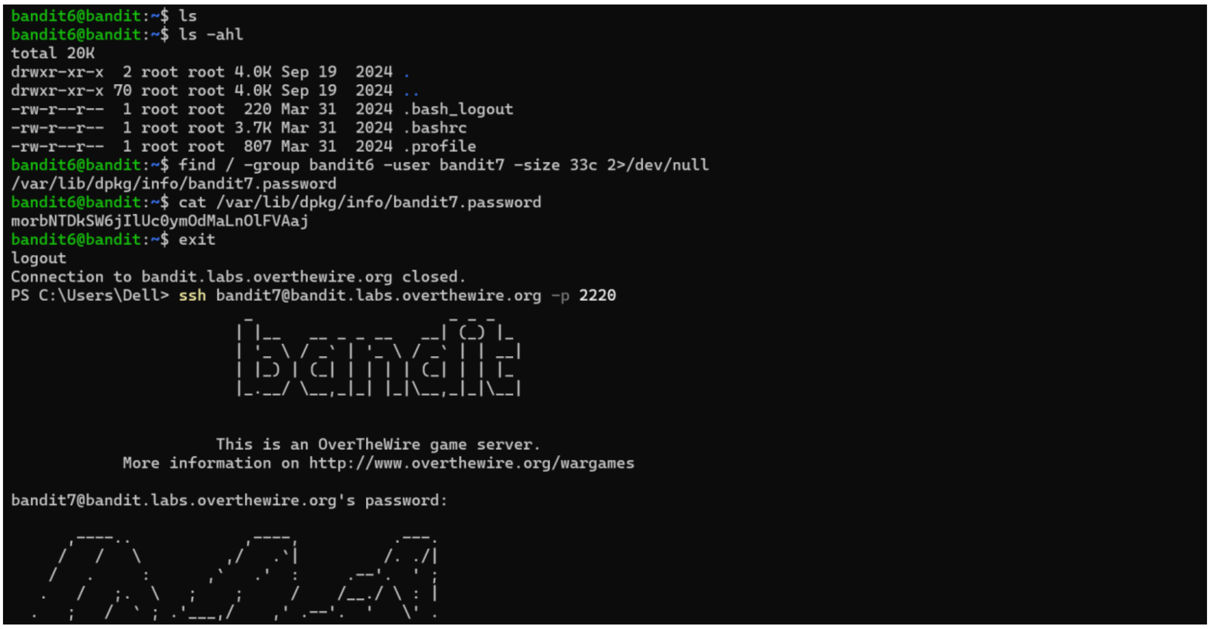
BANDIT LEVEL 6 → LEVEL 7

Task:

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 bandit

- 33 bytes in size



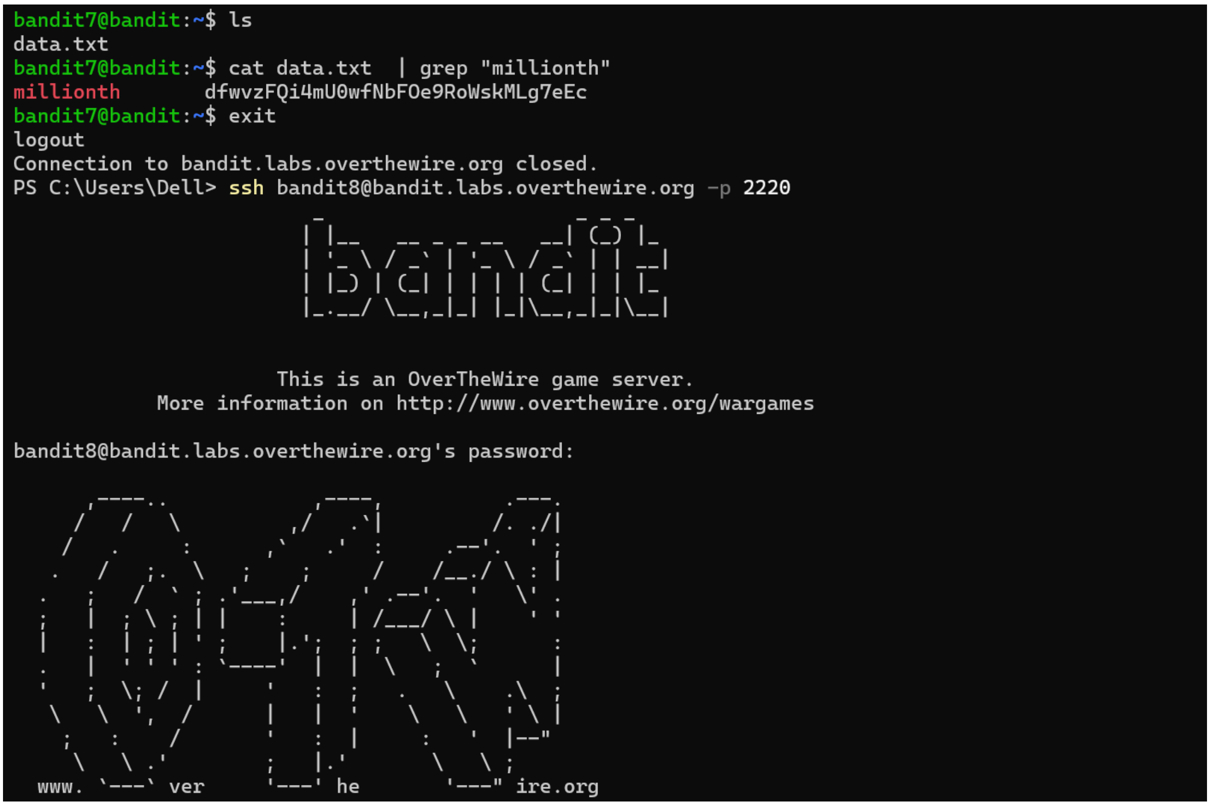
```
bandit6@bandit:~$ ls
bandit6@bandit:~$ ls -ahl
total 20K
drwxr-xr-x  2 root root 4.0K Sep 19  2024 .
drwxr-xr-x 70 root root 4.0K Sep 19  2024 ..
-rw-r--r--  1 root root  220 Mar 31  2024 .bash_logout
-rw-r--r--  1 root root 3.7K Mar 31  2024 .bashrc
-rw-r--r--  1 root root  807 Mar 31  2024 .profile
bandit6@bandit:~$ find / -group bandit6 -user bandit7 -size 33c 2>/dev/null
/var/lib/dpkg/info/bandit7.password
bandit6@bandit:~$ cat /var/lib/dpkg/info/bandit7.password
morbNTDkSW6jIlUc0ymOdMaLnOlFVAaj
bandit6@bandit:~$ exit
logout
Connection to bandit.labs.overthewire.org closed.
PS C:\Users\Dell> ssh bandit7@bandit.labs.overthewire.org -p 2220
                        _                     _ _ _
                       | |__   __ _ _ __   __| (_) |_
                       | '_ \ / _` | '_ \ / _` | | __|
                       | |_) | (_| | | | | (_| | | |_
                       |_.__/ \__,_|_| |_|\__,_|_|\__|


                      This is an OverTheWire game server.
            More information on http://www.overthewire.org/wargames

bandit7@bandit.labs.overthewire.org's password:

      ,----..            ,----,          .---.
     /   /   \         ,/   .`|         /. ./|
    /   .     :      ,`   .'  :     .--'.  ' ;
   .   /   ;.  \   ;    ;     /    /__./ \ : |
  .   ;   /  ` ; .'___,/    ,' .--'.  '   \' .
```

BANDIT LEVEL 7 → LEVEL 8

Task:

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

grep searches for patterns within files.



```
bandit7@bandit:~$ ls
data.txt
bandit7@bandit:~$ cat data.txt  | grep "millionth"
millionth       dfwvzFQi4mU0wfNbFOe9RoWskMLg7eEc
bandit7@bandit:~$ exit
logout
Connection to bandit.labs.overthewire.org closed.
PS C:\Users\Dell> ssh bandit8@bandit.labs.overthewire.org -p 2220
                         _                     _ _ _
                        | |__   __ _ _ __   __| (_) |_
                        | '_ \ / _` | '_ \ / _` | | __|
                        | |_) | (_| | | | | (_| | | |_
                        |_.__/ \__,_|_| |_|\__,_|_|\__|


                      This is an OverTheWire game server.
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bandit8@bandit.labs.overthewire.org's password:

      ,----..            ,----,          .---.
     /   /   \         ,/   .`|         /. ./|
    /   .     :      ,`   .'  :     .--'.  ' ;
   .   /   ;.  \   ;    ;     /    /__./ \ : |
  .   ;   /  ` ; .'___,/    ,' .--'.  '   \' .
  ;   |  ; \ ; | |    :     | /___/ \ |    ' '
  |   :  | ; | ' ;    |.';  ; ;   \  \;      :
  .   |  ' ' ' : `----'  |  |  \   ;  `      |
  '   ;  \; /  |     '   :  ;   .   \    .\  ;
   \   \  ',  /      |   |  '    \   \   ' \ |
    ;   :    /       '   :  |     :   '  |--"
     \   \ .'        ;   |.'       \   \ ;
  www. `---` ver     '---' he       '---" ire.org
```
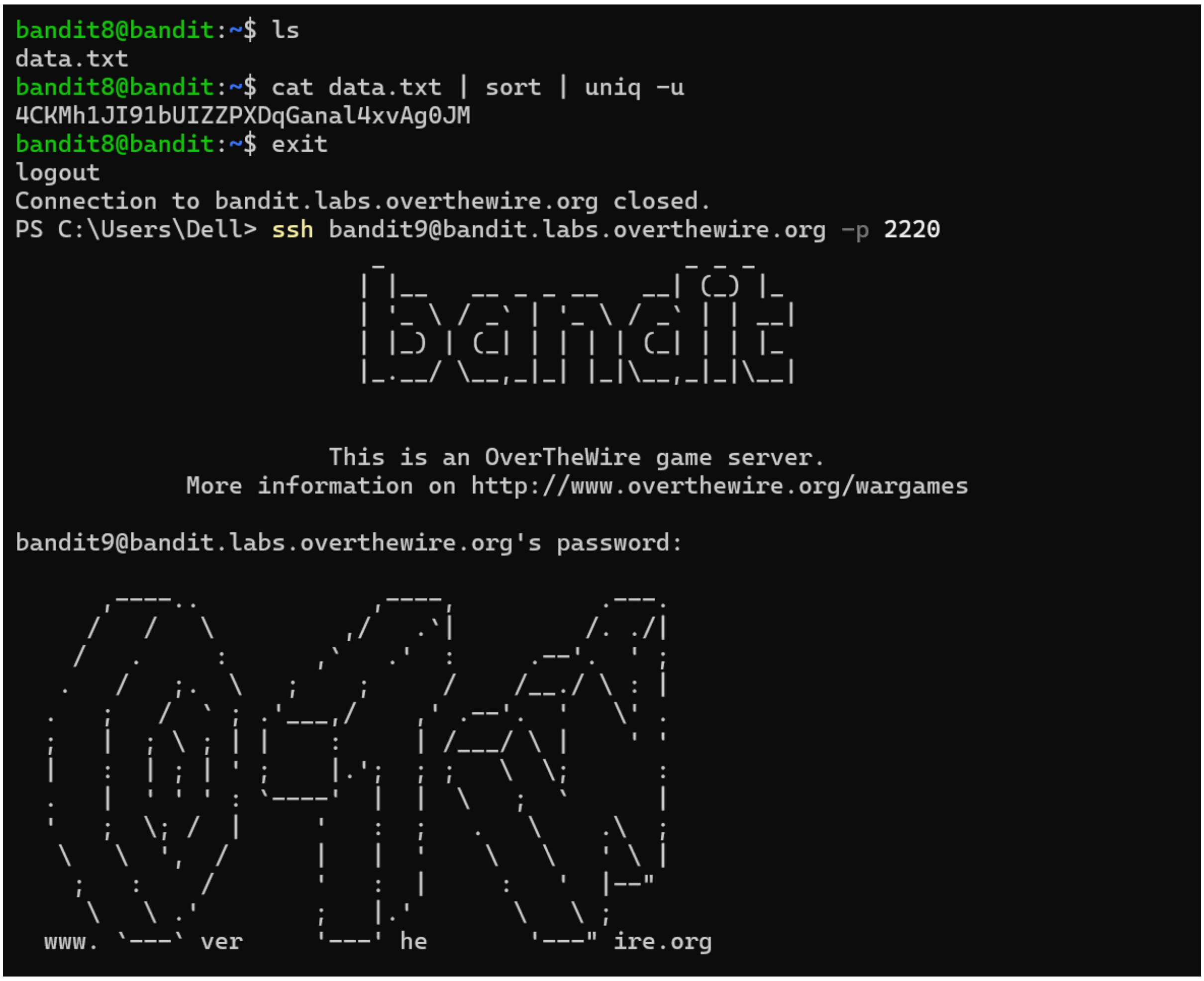

BANDIT LEVEL 8 → LEVEL 9

Task:

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

sort organizes data, and uniq -u finds unique lines.



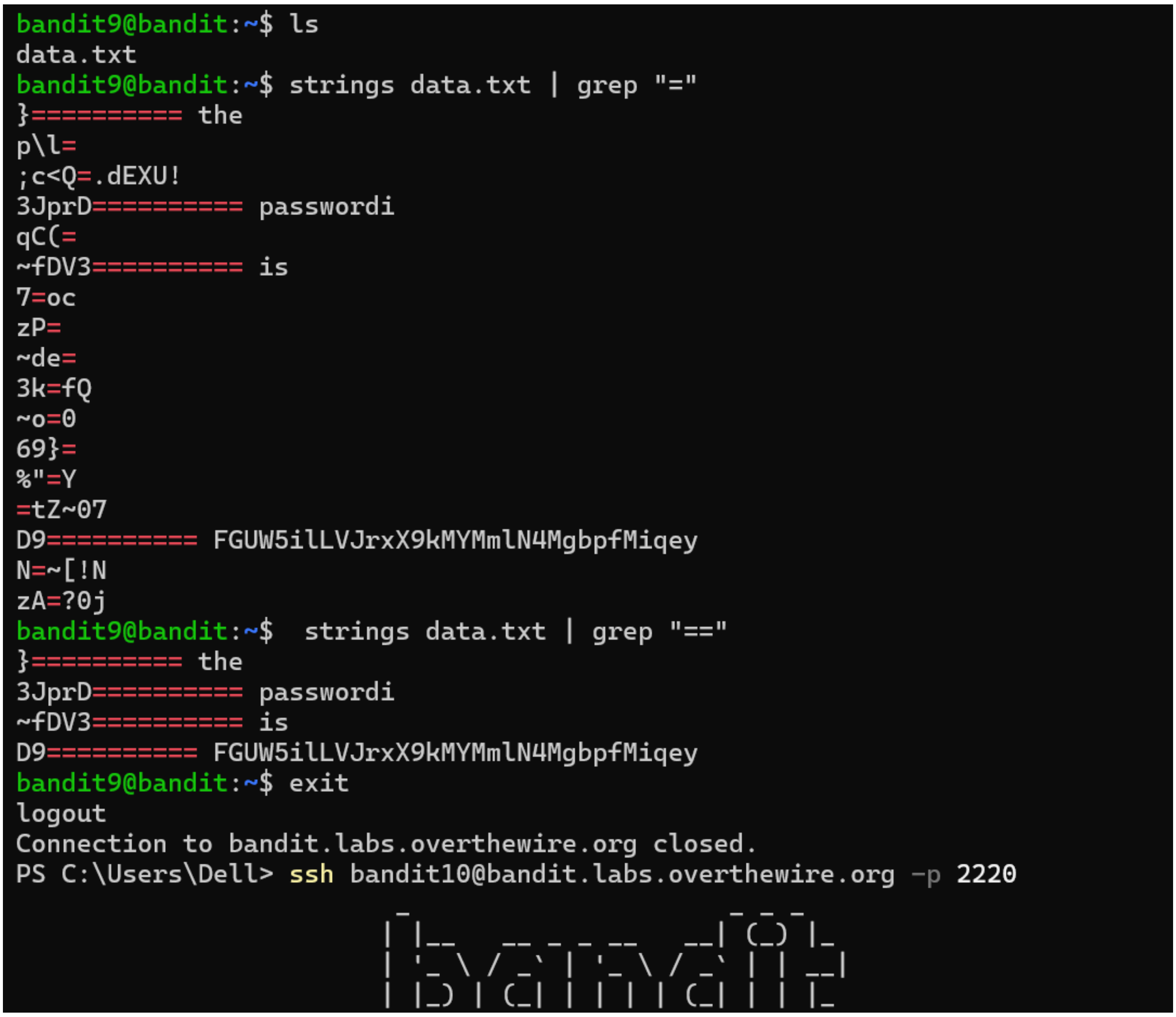
```
bandit8@bandit:~$ ls
data.txt
bandit8@bandit:~$ cat data.txt | sort | uniq -u
4CKMh1JI91bUIZZPXDqGanal4xvAg0JM
bandit8@bandit:~$ exit
logout
Connection to bandit.labs.overthewire.org closed.
PS C:\Users\Dell> ssh bandit9@bandit.labs.overthewire.org -p 2220
                         _                     _ _ _
                        | |__   __ _ _ __   __| (_) |_
                        | '_ \ / _` | '_ \ / _` | | __|
                        | |_) | (_| | | | | (_| | | |_
                        |_.__/ \__,_|_| |_|\__,_|_|\__|


                      This is an OverTheWire game server.
            More information on http://www.overthewire.org/wargames

bandit9@bandit.labs.overthewire.org's password:

      ,----..            ,----,          .---.
     /   /   \         ,/   .`|         /. ./|
    /   .     :      ,`   .'  :     .--'.  ' ;
   .   /   ;.  \   ;    ;     /    /__./ \ : |
  .   ;   /  ` ; .'___,/    ,' .--'.  '   \' .
  ;   |  ; \ ; | |    :     | /___/ \ |    ' '
  |   :  | ; | ' ;    |.';  ; ;   \  \;      :
  .   |  ' ' ' : `----'  |  |  \   ;  `      |
  '   ;  \; /  |     '   :  ;   .   \    .\  ;
   \   \  ',  /      |   |  '    \   \   ' \ |
    ;   :    /       '   :  |     :   '  |--"
     \   \ .'        ;   |.'       \   \ ;
  www. `---` ver     '---' he       '---" ire.org
```

BANDIT LEVEL 9 → LEVEL 10

Task:

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.

strings extracts human-readable text from binary files.



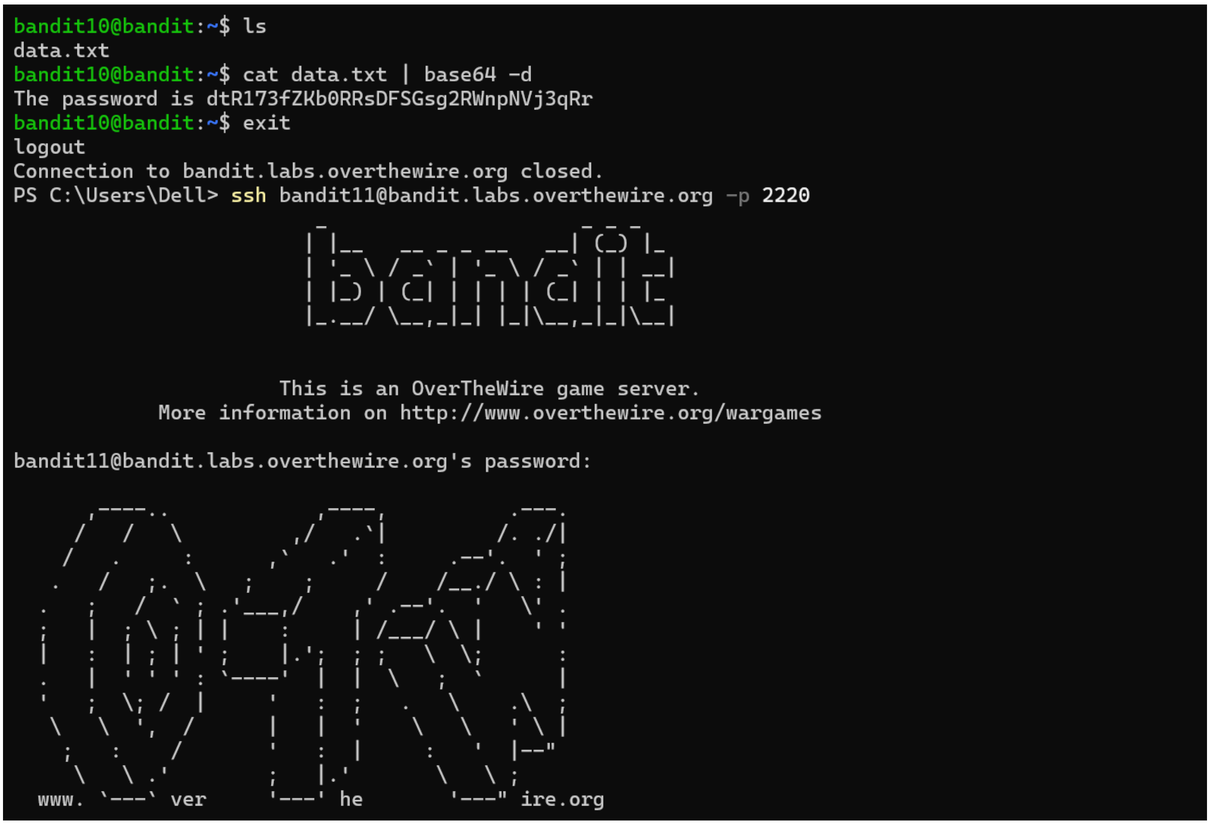
```
bandit9@bandit:~$ ls
data.txt
bandit9@bandit:~$ strings data.txt | grep "="
}========== the
p\l=
;c<Q=.dEXU!
3JprD========== passwordi
qC(=
~fDV3========== is
7=oc
zP=
~de=
3k=fQ
~o=0
69}=
%"=Y
=tZ~07
D9========== FGUW5ilLVJrxX9kMYMmlN4MgbpfMiqey
N=~[!N
zA=?0j
bandit9@bandit:~$  strings data.txt | grep "=="
}========== the
3JprD========== passwordi
~fDV3========== is
D9========== FGUW5ilLVJrxX9kMYMmlN4MgbpfMiqey
bandit9@bandit:~$ exit
logout
Connection to bandit.labs.overthewire.org closed.
PS C:\Users\Dell> ssh bandit10@bandit.labs.overthewire.org -p 2220
                         _                     _ _ _
                        | |__   __ _ _ __   __| (_) |_
                        | '_ \ / _` | '_ \ / _` | | __|
                        | |_) | (_| | | | | (_| | | |_
```

BANDIT LEVEL 10 → LEVEL 11

Task:

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

Base64 is an encoding scheme used to safely transmit binary data as text.



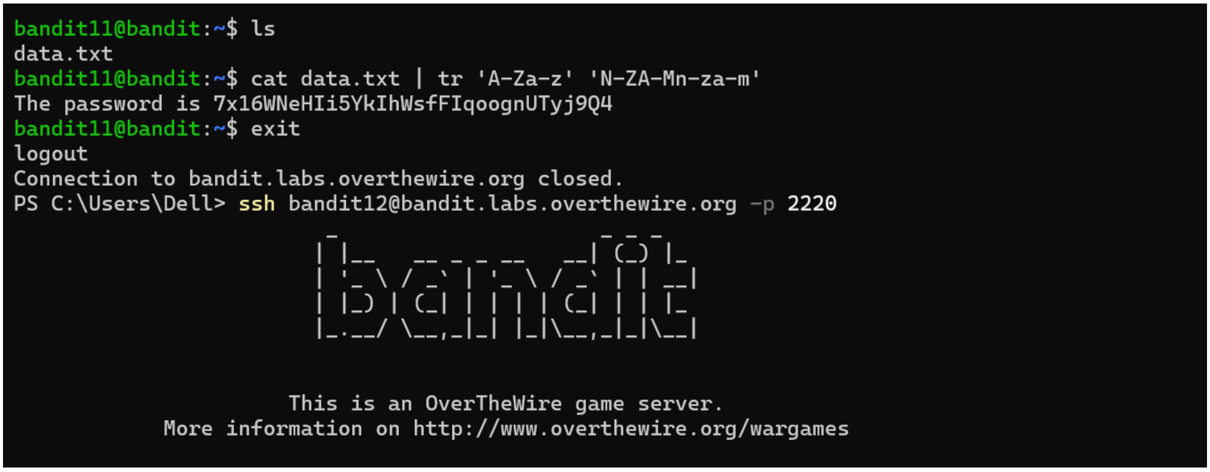
```
bandit10@bandit:~$ ls
data.txt
bandit10@bandit:~$ cat data.txt | base64 -d
The password is dtR173fZKb0RRsDFSGsg2RWnpNVj3qRr
bandit10@bandit:~$ exit
logout
Connection to bandit.labs.overthewire.org closed.
PS C:\Users\Dell> ssh bandit11@bandit.labs.overthewire.org -p 2220
                         _                     _ _ _
                        | |__   __ _ _ __   __| (_) |_
                        | '_ \ / _` | '_ \ / _` | | __|
                        | |_) | (_| | | | | (_| | | |_
                        |_.__/ \__,_|_| |_|\__,_|_|\__|


                      This is an OverTheWire game server.
            More information on http://www.overthewire.org/wargames

bandit11@bandit.labs.overthewire.org's password:

      ,----..            ,----,          .---.
     /   /   \         ,/   .`|         /. ./|
    /   .     :      ,`   .'  :     .--'.  ' ;
   .   /   ;.  \   ;    ;     /    /__./ \ : |
  .   ;   /  ` ; .'___,/    ,'  .--'.  '   \' .
  ;   |  ; \ ; | |    :     |  /___/ \ |    ' '
  |   :  | ; | ' ;    |.';  ;  ;   \  \;      :
  .   |  ' ' ' : `----'  |  |   \   ;  `      |
  '   ;  \; /  |     '   :  ;    .   \    .\  ;
   \   \  ',  /      |   |  '     \   \   ' \ |
    ;   :    /       '   :  |      :   '  |--"
     \   \ .'        ;   |.'        \   \ ;
  www. `---` ver     '---' he        '---" ire.org
```

BANDIT LEVEL 11 → LEVEL 12

Task:

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

ROT13 is a simple letter substitution cipher



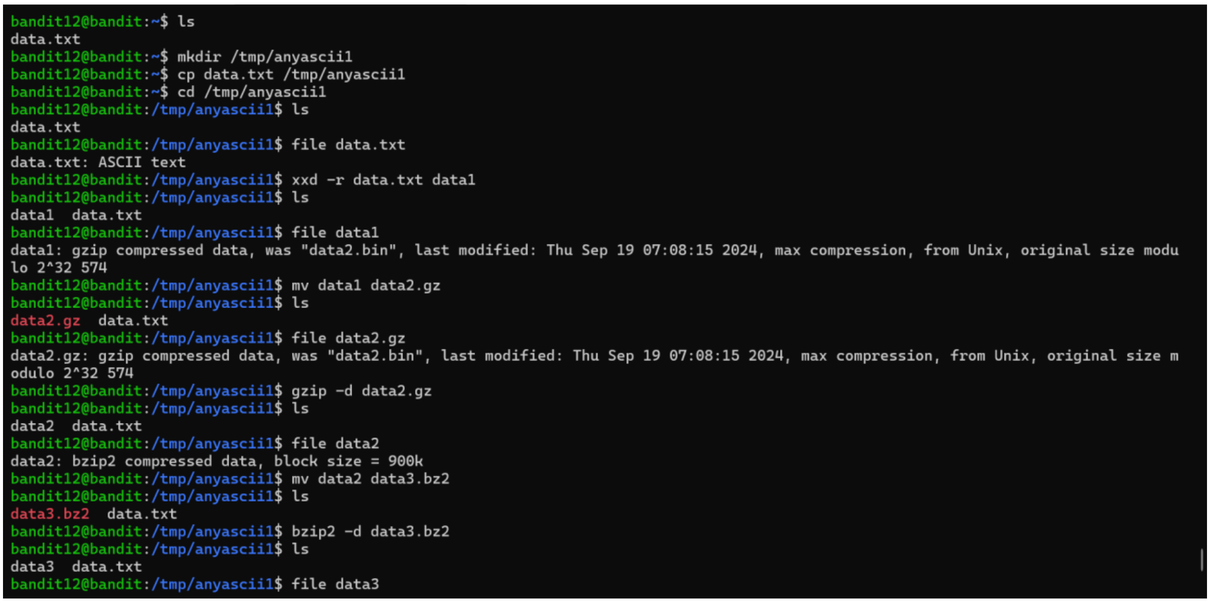
```
bandit11@bandit:~$ ls
data.txt
bandit11@bandit:~$ cat data.txt | tr 'A-Za-z' 'N-ZA-Mn-za-m'
The password is 7x16WNeHIi5YkIhWsfFIqoognUTyj9Q4
bandit11@bandit:~$ exit
logout
Connection to bandit.labs.overthewire.org closed.
PS C:\Users\Dell> ssh bandit12@bandit.labs.overthewire.org -p 2220
                         _                     _ _ _
                        | |__   __ _ _ __   __| (_) |_
                        | '_ \ / _` | '_ \ / _` | | __|
                        | |_) | (_| | | | | (_| | | |_
                        |_.__/ \__,_|_| |_|\__,_|_|\__|


                      This is an OverTheWire game server.
            More information on http://www.overthewire.org/wargames
```

BANDIT LEVEL 12 → LEVEL 13

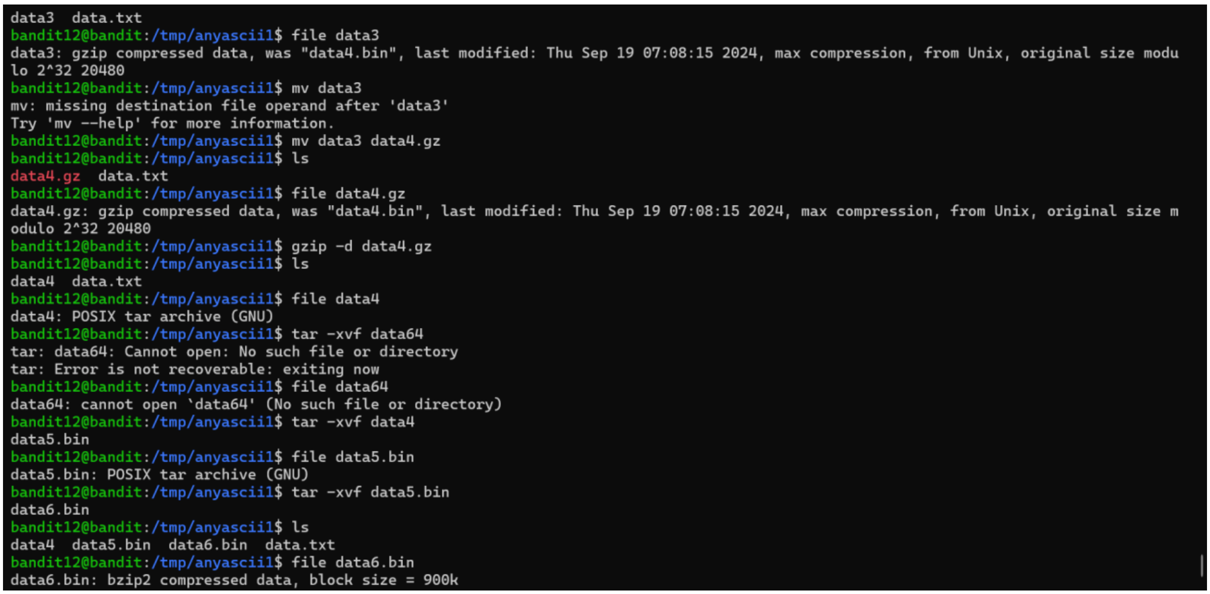
Task:

The password for the next level is stored in the file data.txt, which is a hexdump 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. Use mkdir with a hard to guess directory name. Or better, use the command “mktemp -d”. Then copy the datafile using cp, and rename it using mv

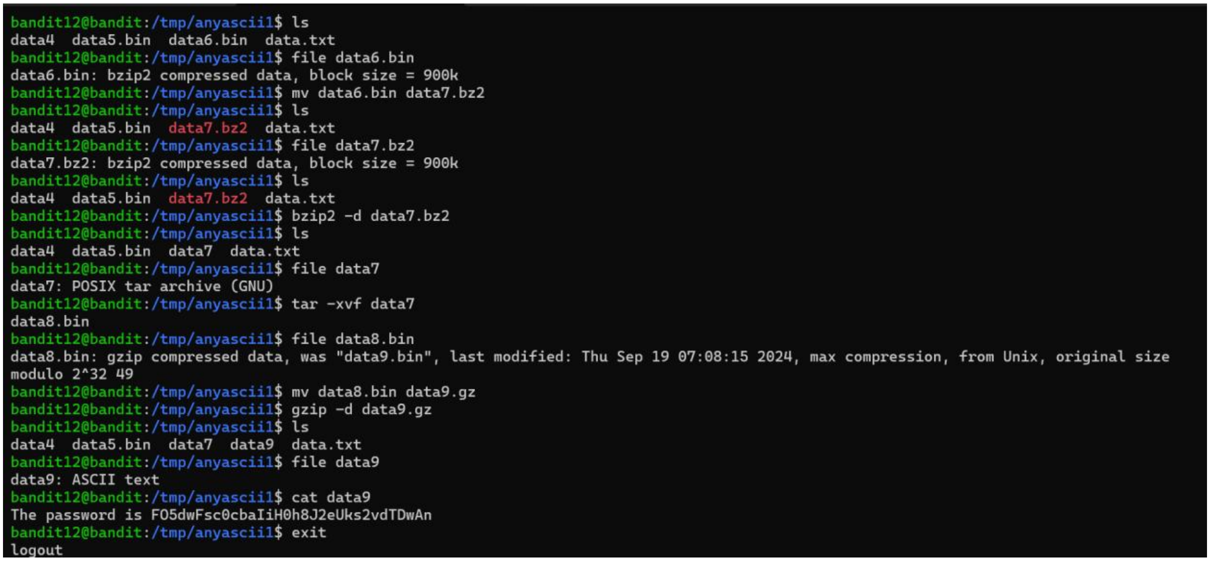
Files can be compressed in multiple ways (tar, bzip2, gzip). We need to extract them sequentially.



```
bandit12@bandit:~$ ls
data.txt
bandit12@bandit:~$ mkdir /tmp/anyascii1
bandit12@bandit:~$ cp data.txt /tmp/anyascii1
bandit12@bandit:~$ cd /tmp/anyascii1
bandit12@bandit:/tmp/anyascii1$ ls
data.txt
bandit12@bandit:/tmp/anyascii1$ file data.txt
data.txt: ASCII text
bandit12@bandit:/tmp/anyascii1$ xxd -r data.txt data1
bandit12@bandit:/tmp/anyascii1$ ls
data1  data.txt
bandit12@bandit:/tmp/anyascii1$ file data1
data1: gzip compressed data, was "data2.bin", last modified: Thu Sep 19 07:08:15 2024, max compression, from Unix, original size modu
lo 2^32 574
bandit12@bandit:/tmp/anyascii1$ mv data1 data2.gz
bandit12@bandit:/tmp/anyascii1$ ls
data2.gz  data.txt
bandit12@bandit:/tmp/anyascii1$ file data2.gz
data2.gz: gzip compressed data, was "data2.bin", last modified: Thu Sep 19 07:08:15 2024, max compression, from Unix, original size m
odulo 2^32 574
bandit12@bandit:/tmp/anyascii1$ gzip -d data2.gz
bandit12@bandit:/tmp/anyascii1$ ls
data2  data.txt
bandit12@bandit:/tmp/anyascii1$ file data2
data2: bzip2 compressed data, block size = 900k
bandit12@bandit:/tmp/anyascii1$ mv data2 data3.bz2
bandit12@bandit:/tmp/anyascii1$ ls
data3.bz2  data.txt
bandit12@bandit:/tmp/anyascii1$ bzip2 -d data3.bz2
bandit12@bandit:/tmp/anyascii1$ ls
data3  data.txt
bandit12@bandit:/tmp/anyascii1$ file data3
```



```
data3  data.txt
bandit12@bandit:/tmp/anyascii1$ file data3
data3: gzip compressed data, was "data4.bin", last modified: Thu Sep 19 07:08:15 2024, max compression, from Unix, original size modu
lo 2^32 20480
bandit12@bandit:/tmp/anyascii1$ mv data3
mv: missing destination file operand after 'data3'
Try 'mv --help' for more information.
bandit12@bandit:/tmp/anyascii1$ mv data3 data4.gz
bandit12@bandit:/tmp/anyascii1$ ls
data4.gz  data.txt
bandit12@bandit:/tmp/anyascii1$ file data4.gz
data4.gz: gzip compressed data, was "data4.bin", last modified: Thu Sep 19 07:08:15 2024, max compression, from Unix, original size m
odulo 2^32 20480
bandit12@bandit:/tmp/anyascii1$ gzip -d data4.gz
bandit12@bandit:/tmp/anyascii1$ ls
data4  data.txt
bandit12@bandit:/tmp/anyascii1$ file data4
data4: POSIX tar archive (GNU)
bandit12@bandit:/tmp/anyascii1$ tar -xvf data64
tar: data64: Cannot open: No such file or directory
tar: Error is not recoverable: exiting now
bandit12@bandit:/tmp/anyascii1$ file data64
data64: cannot open `data64' (No such file or directory)
bandit12@bandit:/tmp/anyascii1$ tar -xvf data4
data5.bin
bandit12@bandit:/tmp/anyascii1$ file data5.bin
data5.bin: POSIX tar archive (GNU)
bandit12@bandit:/tmp/anyascii1$ tar -xvf data5.bin
data6.bin
bandit12@bandit:/tmp/anyascii1$ ls
data4  data5.bin  data6.bin  data.txt
bandit12@bandit:/tmp/anyascii1$ file data6.bin
data6.bin: bzip2 compressed data, block size = 900k
```



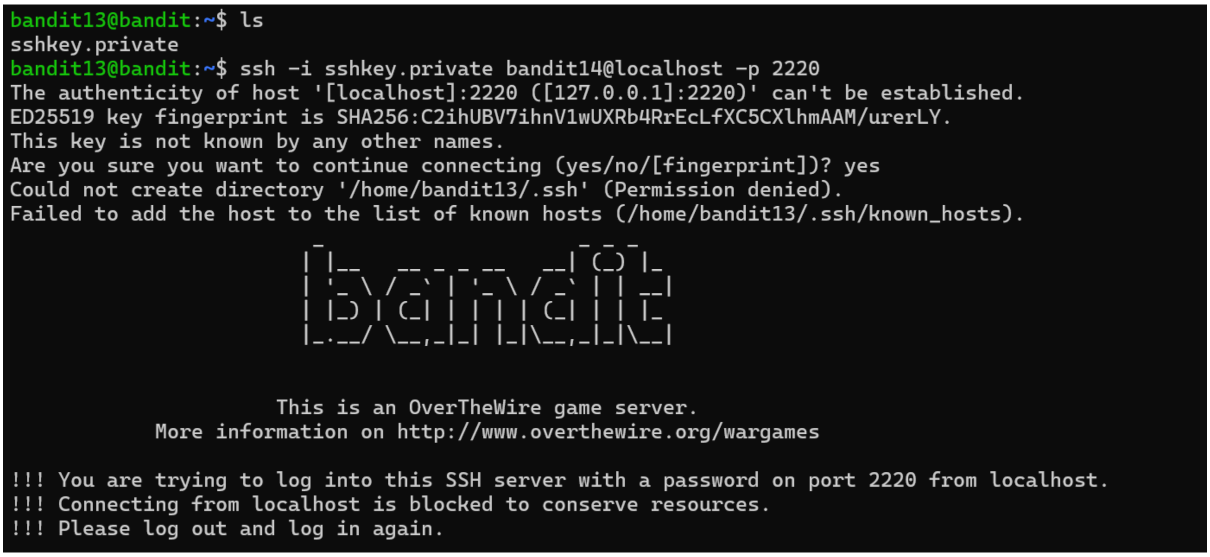
```
bandit12@bandit:/tmp/anyascii1$ ls
data4  data5.bin  data6.bin  data.txt
bandit12@bandit:/tmp/anyascii1$ file data6.bin
data6.bin: bzip2 compressed data, block size = 900k
bandit12@bandit:/tmp/anyascii1$ mv data6.bin data7.bz2
bandit12@bandit:/tmp/anyascii1$ ls
data4  data5.bin  data7.bz2  data.txt
bandit12@bandit:/tmp/anyascii1$ file data7.bz2
data7.bz2: bzip2 compressed data, block size = 900k
bandit12@bandit:/tmp/anyascii1$ ls
data4  data5.bin  data7.bz2  data.txt
bandit12@bandit:/tmp/anyascii1$ bzip2 -d data7.bz2
bandit12@bandit:/tmp/anyascii1$ ls
data4  data5.bin  data7  data.txt
bandit12@bandit:/tmp/anyascii1$ file data7
data7: POSIX tar archive (GNU)
bandit12@bandit:/tmp/anyascii1$ tar -xvf data7
data8.bin
bandit12@bandit:/tmp/anyascii1$ file data8.bin
data8.bin: gzip compressed data, was "data9.bin", last modified: Thu Sep 19 07:08:15 2024, max compression, from Unix, original size
modulo 2^32 49
bandit12@bandit:/tmp/anyascii1$ mv data8.bin data9.gz
bandit12@bandit:/tmp/anyascii1$ gzip -d data9.gz
bandit12@bandit:/tmp/anyascii1$ ls
data4  data5.bin  data7  data9  data.txt
bandit12@bandit:/tmp/anyascii1$ file data9
data9: ASCII text
bandit12@bandit:/tmp/anyascii1$ cat data9
The password is FO5dwFsc0cbaIiH0h8J2eUks2vdTDwAn
bandit12@bandit:/tmp/anyascii1$ exit
logout
```

BANDIT LEVEL 13 → LEVEL 14

Task:

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

SSH keys allow password-less authentication.



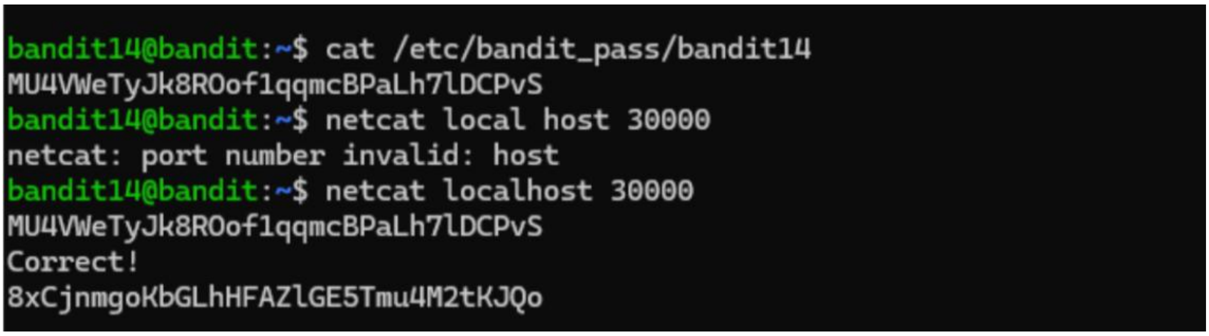
```
bandit13@bandit:~$ ls
sshkey.private
bandit13@bandit:~$ ssh -i sshkey.private bandit14@localhost -p 2220
The authenticity of host '[localhost]:2220 ([127.0.0.1]:2220)' can't be established.
ED25519 key fingerprint is SHA256:C2ihUBV7ihnV1wUXRb4RrEcLfXC5CXlhmAAM/urerLY.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Could not create directory '/home/bandit13/.ssh' (Permission denied).
Failed to add the host to the list of known hosts (/home/bandit13/.ssh/known_hosts).
                         _                     _ _ _
                        | |__   __ _ _ __   __| (_) |_
                        | '_ \ / _` | '_ \ / _` | | __|
                        | |_) | (_| | | | | (_| | | |_
                        |_.__/ \__,_|_| |_|\__,_|_|\__|


                      This is an OverTheWire game server.
            More information on http://www.overthewire.org/wargames

!!! You are trying to log into this SSH server with a password on port 2220 from localhost.
!!! Connecting from localhost is blocked to conserve resources.
!!! Please log out and log in again.
```

BANDIT LEVEL 14 → LEVEL 15

Task:

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

Netcat (nc) sends and receives data over the network.



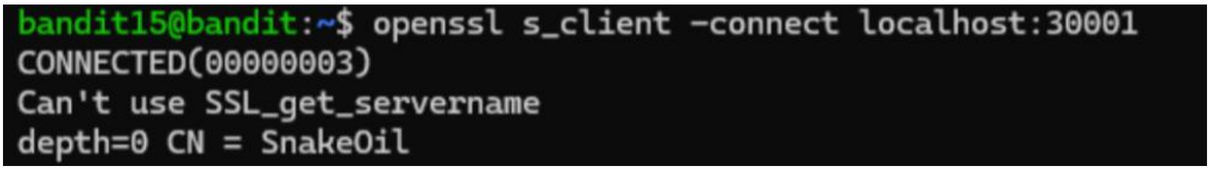
```
bandit14@bandit:~$ cat /etc/bandit_pass/bandit14
MU4VWeTyJk8ROof1qqmcBPaLh7lDCPvS
bandit14@bandit:~$ netcat local host 30000
netcat: port number invalid: host
bandit14@bandit:~$ netcat localhost 30000
MU4VWeTyJk8ROof1qqmcBPaLh7lDCPvS
Correct!
8xCjnmgoKbGLhHFAZlGE5Tmu4M2tKJQo
```

BANDIT LEVEL 15 → LEVEL 16

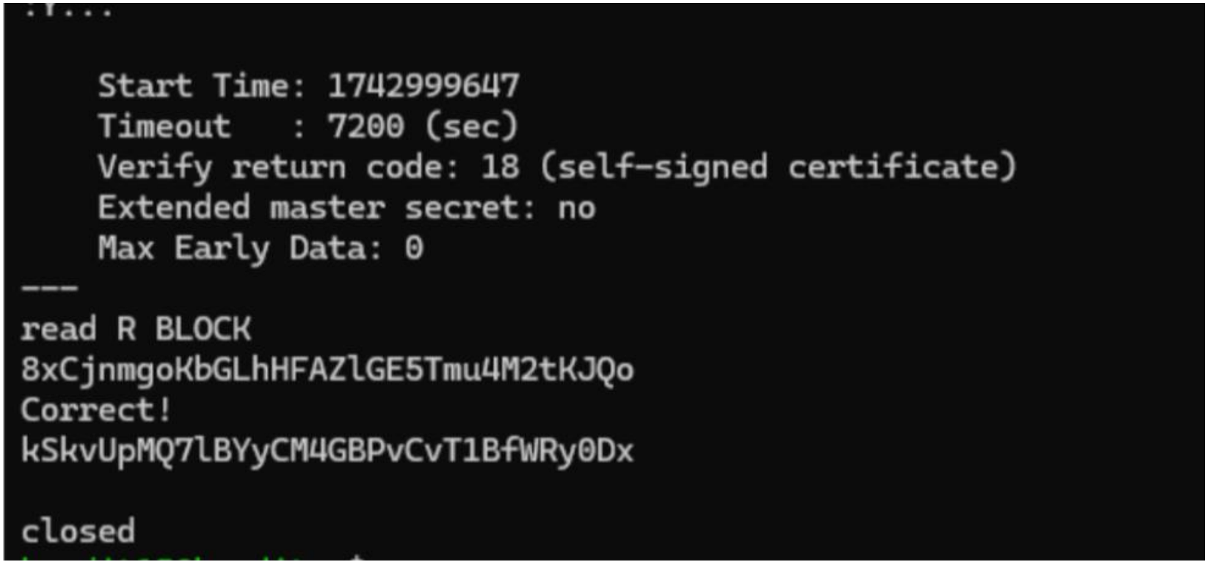
Task:

The password for the next level can be retrieved by submitting the password of the current level to port 30001 on localhost using SSL/TLS encryption.

openssl s_client connects to secure SSL/TLS services.



```
bandit15@bandit:~$ openssl s_client -connect localhost:30001
CONNECTED(00000003)
Can't use SSL_get_servername
depth=0 CN = SnakeOil
```



```
    Start Time: 1742999647
    Timeout   : 7200 (sec)
    Verify return code: 18 (self-signed certificate)
    Extended master secret: no
    Max Early Data: 0
---
read R BLOCK
8xCjnmgoKbGLhHFAZlGE5Tmu4M2tKJQo
Correct!
kSkvUpMQ7lBYyCM4GBPvCvT1BfWRy0Dx

closed
```