

OverTheWire – Bandit:

Level 0-10

Today, I will play a war-game called **Bandit**. It has 34 levels. In this write-up I will play level 0-10.

The main objective is to access password files which will help us login into the next levels.

Level 0

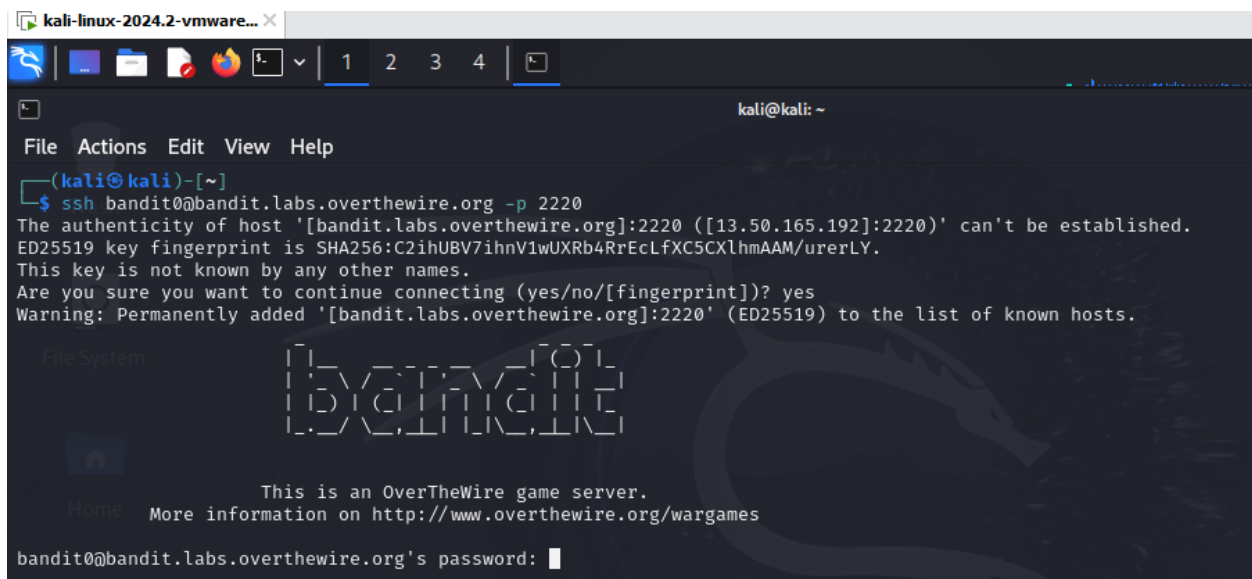
This is a pretty simple level. In this level we will connect to a host using ssh, so we will use the ssh command here. We have the following information on the instruction page of bandit.

Host: bandit.labs.overthewire.org

Port: 2220

Username: bandit0

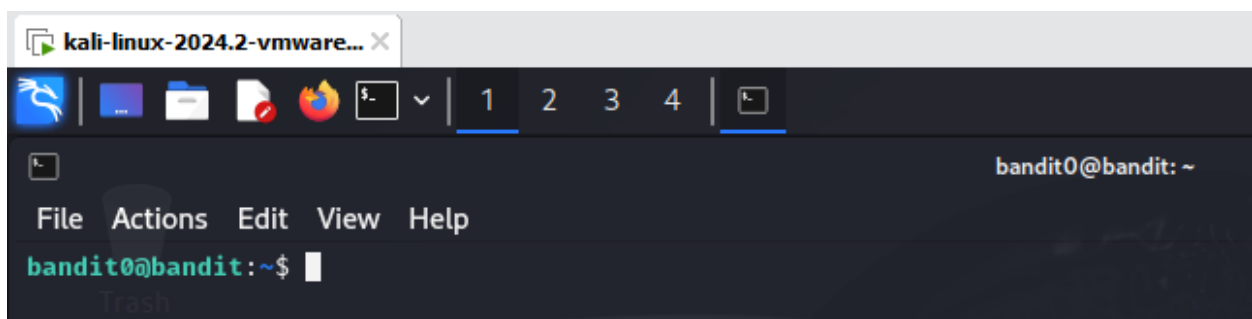
Password: bandit0



```
kali-linux-2024.2-vmware... X
File Actions Edit View Help
kali@kali: ~
(kali@kali)-[~]
$ ssh bandit0@bandit.labs.overthewire.org -p 2220
The authenticity of host '[bandit.labs.overthewire.org]:2220 ([13.50.165.192]: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
Warning: Permanently added '[bandit.labs.overthewire.org]:2220' (ED25519) to the list of known hosts.

bandit0@bandit.labs.overthewire.org's password: █
```

So here I entered the password and we are in bandit0 shell now:



```
kali-linux-2024.2-vmware... X
File Actions Edit View Help
bandit0@bandit: ~$ █
```

Level 0-1

Now from bandit0 we have to find the password for bandit level 1. And for that I am going to list the files in the directory to find the readme file. And this was the hint given on the bandit webpage:

SSH Information
Host: bandit.labs.overthewire.org
Port: 2220

Bandit Level 0 → Level 1

Level Goal

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.

Commands you may need to solve this level

ls, cd, cat, file, du, find

TIP: Create a file for notes and passwords on your local machine!

Passwords for levels are *not* saved automatically. If you do not save them yourself, you will need to start over from bandit0.

Passwords also occasionally change. It is recommended to take notes on how to solve each challenge. As levels get more challenging, detailed notes are useful

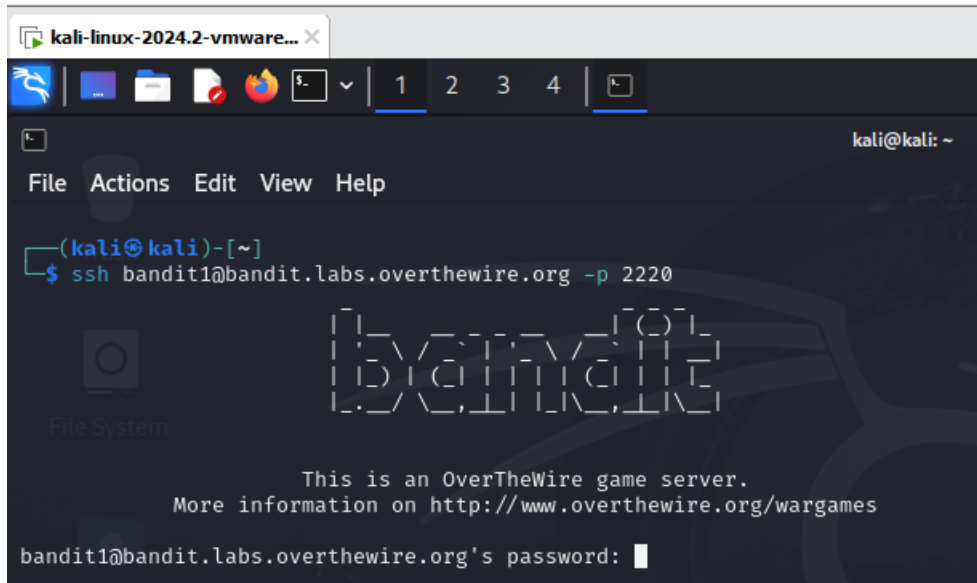
Now to list the files in the directory I am going to use the `ls` command:

```
bandit0@bandit: ~  
File Actions Edit View Help  
bandit0@bandit:~$ ls -la  
total 24  
drwxr-xr-x  2 root    root    4096 Jul 17 15:57 .  
drwxr-xr-x 70 root    root    4096 Jul 17 15:58 ..  
-rw-r--r--  1 root    root     220 Mar 31 08:41 .bash_logout  
-rw-r--r--  1 root    root    3771 Mar 31 08:41 .bashrc  
-rw-r--r--  1 root    root     807 Mar 31 08:41 .profile  
-rw-r----- 1 bandit1 bandit0  437 Jul 17 15:57 readme  
bandit0@bandit:~$
```

See here I got the readme file, now to read this file I am gonna use the `cat` command.

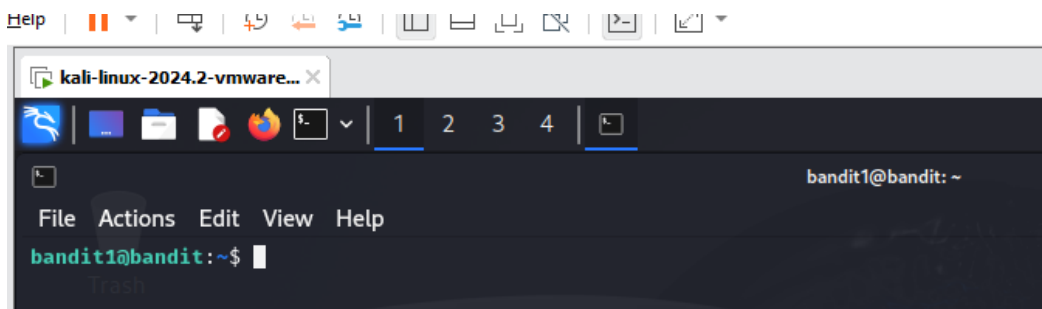
```
bandit0@bandit:~$ cat readme  
Congratulations on your first steps into the bandit game!!  
Please make sure you have read the rules at https://overthewire.org/rules/  
If you are following a course, workshop, walthrough or other educational activity,  
please inform the instructor about the rules 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: ZjLjTmM6FvvyRnrb2rfNW0Z0Ta6ip5If  
bandit0@bandit:~$
```

Now I am going to use this password for logging in to the next level using `ssh` command:



```
kali@kali: ~  
File Actions Edit View Help  
(kali@kali)-[~]  
$ 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: 
```

After entering the password here I am in bandit1 shell.



```
bandit1@bandit: ~  
File Actions Edit View Help  
bandit1@bandit:~$ 
```

Level 1-2:

So here we can see that now the password is in -(file).

Information
Host: bandit.labs.overthewire.org
Port: 2220

Bandit

Level 0

Level 0 → Level 1

Level 1 → Level 2

Level 2 → Level 3

Level 3 → Level 4

Bandit Level 1 → Level 2

Level Goal

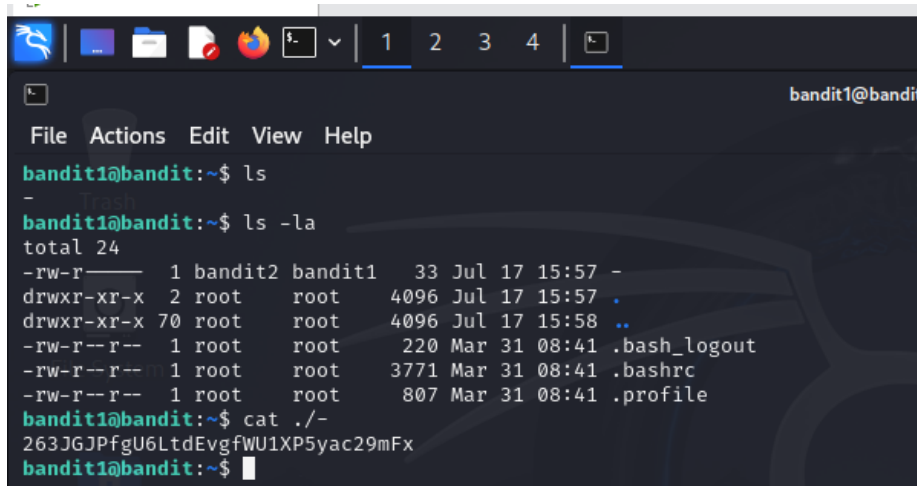
The password for the next level is stored in a file called - located in the home directory

Commands you may need to solve this level

ls, cd, cat, file, du, find

So to find the password I will use the **ls** command. As the file is named -(hyphen) we won't be able to read it simply by cat command. As cat command considers -(hyphen) as stdin/Stout. If we directly use cat command, it won't be able to understand that hyphen is a file name. So, we will prefix the command with the path **/**.

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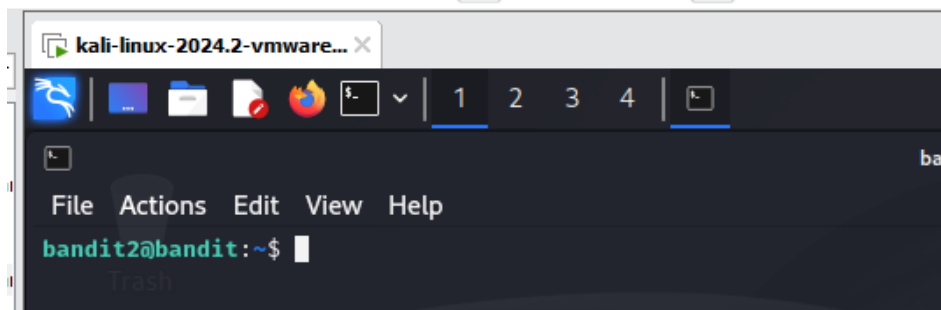


```
bandit1@bandit:~$ ls
-
bandit1@bandit:~$ ls -la
total 24
-rw-r----- 1 bandit2 bandit1 33 Jul 17 15:57 -
drwxr-xr-x 2 root root 4096 Jul 17 15:57 .
drwxr-xr-x 70 root root 4096 Jul 17 15:58 ..
-rw-r--r-- 1 root root 220 Mar 31 08:41 .bash_logout
-rw-r--r-- 1 root root 3771 Mar 31 08:41 .bashrc
-rw-r--r-- 1 root root 807 Mar 31 08:41 .profile
bandit1@bandit:~$ cat ./-
263JGJPfgU6LtdEvGfWU1XP5yac29mFx
bandit1@bandit:~$
```

Now I am going to use this password for logging in to the next level using `ssh` command:

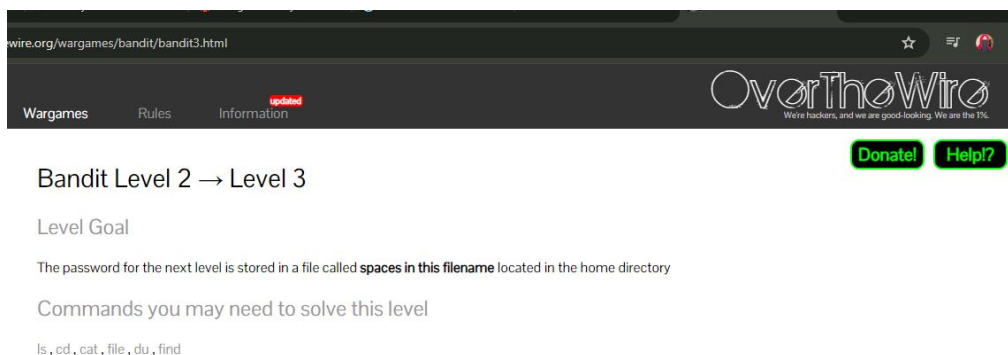
```
ssh bandit2@bandit.labs.overthewire.org -p 2220
```

After entering the password here I am in bandit2 shell.



```
bandit2@bandit:~$
```

Level 2-3:



wire.org/wargames/bandit/bandit3.html

Wargames Rules Information updated

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Bandit Level 2 → Level 3

Level Goal

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

Commands you may need to solve this level

ls, cd, cat, file, du, find

We can see that the password for the next level is stored inside a file named **spaces in this filename**. So, to find it we use the `ls` command. Now we have to read the file. As the file is named **spaces in this filename**, we won't be able to read it simply by `cat` command. So, we will write the name of the file in quotes.

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```
kali-linux-2024.2-vmware... x
File Actions Edit View Help
bandit2@bandit:~$ ls
spaces in this filename
bandit2@bandit:~$ cat "spaces in this filename"
MNk8KNH3Usiio41PRUEoDFPqfxLPLSmx
bandit2@bandit:~$
```

After entering the password we are in the bandit3 shell:

```
kali-linux-2024.2-vmware... x
File Actions Edit View Help
bandit3@bandit: ~
bandit3@bandit:~$
```

Level 3-4:

Wargames Rules Information ^{updated}

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Bandit Level 3 → Level 4

Level Goal

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

Commands you may need to solve this level

ls, cd, cat, file, du, find

The password for the next level is stored inside a directory named **inhere**. So, we use the **ls** command.

It might be the case that the file is hidden. So, we run ls command with **-al** parameter. It lists all files including the hidden one. And we found the .Hiding-From-You file.

```
bandit3@bandit:~$ ls
inhere
bandit3@bandit:~$ cd inhere/
bandit3@bandit:~/inhere$ ls
bandit3@bandit:~/inhere$ ls -al
total 12
drwxr-xr-x 2 root root 4096 Jul 17 15:57 .
drwxr-xr-x 3 root root 4096 Jul 17 15:57 ..
-rw-r----- 1 bandit4 bandit3 33 Jul 17 15:57 ... Hiding-From-You
```

Now we would simply use the cat command to read the password stored in the file.

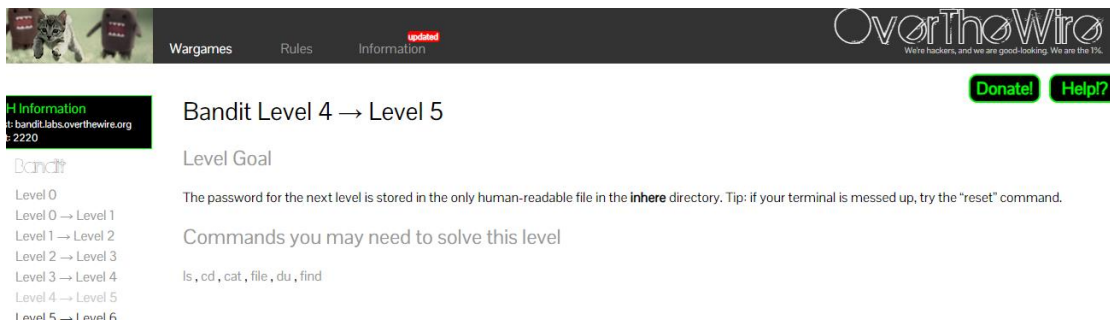
```
bandit3@bandit:~/inhere$ cat ...Hiding-From-You
2WmrDFRmJIq3IPxneAaMGhap0pFhF3NJ
bandit3@bandit:~/inhere$
```

After entering the password we are in bandit4 shell:

```
Enjoy your stay!

bandit4@bandit:~$
```

Level 4-5:



The screenshot shows the OverTheWire website interface. At the top, there are links for 'Wargames', 'Rules', and 'Information' (with a red 'updated' tag). The 'OverTheWire' logo is on the right, with the tagline 'We're hackers, and we are good-looking. We are the PK.' Below the logo are 'Donate!' and 'Help!' buttons. On the left, there is a sidebar with 'Information' and 'Bandit' sections. The main content area is titled 'Bandit Level 4 → Level 5' and includes a 'Level Goal' section stating: '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.' Below this is a 'Commands you may need to solve this level' section listing 'ls, cd, cat, file, du, find'.

So, here the password is in the inhere directory which is a human-readable file, So after getting inside inhere directory we run ls command. Here we can see there are so many files given.

```
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$
```

We will use the file command to get the information about the files.

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

Here I saw that the file07 contains **ASCII text**(readable text). So, let's read it using cat command.

```
bandit4@bandit:~/inhere$ cat ./-file07
4oQYVPkxZ00E005pTW81FB8j8lxXGUQw
bandit4@bandit:~/inhere$
```

This gave me the password for the next level. We will use it to get an SSH connection as bandit5.

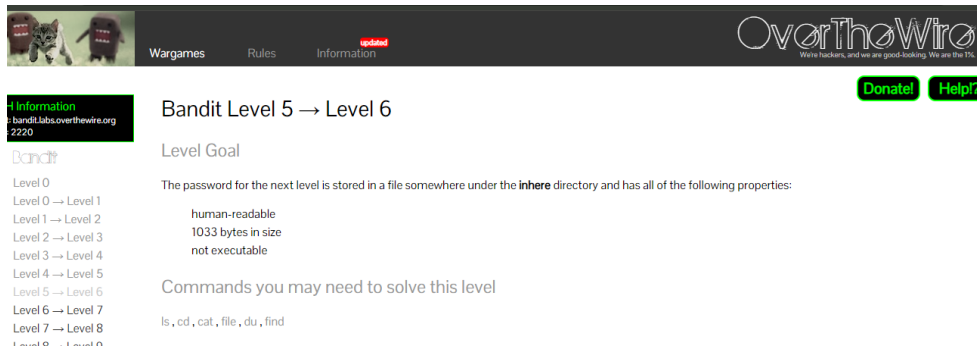
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Here we are in bandit shell5:

```
Enjoy your stay!

bandit5@bandit:~$
```

Level 5-6:



After getting inside inhere directory we run ls command. Here we can see there are so many files given.

```
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$
```

Again there are so many files given, so according to the hint given (file size = 1033 bytes). We can use the find size command to see which file is of 1033 bytes:

```
bandit5@bandit:~/inhere$ find . -size 1033c
./maybehere07/.file2
bandit5@bandit:~/inhere$
```

Now we can see that the file size matches this file, so let's see the cat command:

```
bandit5@bandit:~/inhere$ cat ./maybehere07/.file2
HWasnPhtq9AVKe0dmk45nxy20cvUa6EG

bandit5@bandit:~/inhere$
```

So got the password for bandit 6. After using the credentials we are in bandit shell 6:

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Enjoy your stay!

```
bandit6@bandit:~$
```

Level 6-7:

Wargames Rules ^{updated} Information

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Bandit Level 6 → Level 7

Level Goal

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

Commands you may need to solve this level

ls, cd, cat, file, du, find, grep

So here according to the hints given password is somewhere on the server, but finding the password in this way is difficult so we can use the other hints using the find command, As the user is bandit7 and the group is bandit6 and size is 33 bytes:

```
bandit6@bandit:~$ find / -user bandit7 -group bandit6 -size 33c
find: '/sys/kernel/tracing': Permission denied
```

So here we got the password file:

```
find: '/root': Permission denied
find: '/tmp': Permission denied
find: '/lost+found': Permission denied
find: '/dev/shm': Permission denied
find: '/dev/mqueue': Permission denied
find: '/var/spool/bandit24': Permission denied
find: '/var/spool/rsyslog': Permission denied
find: '/var/spool/cron/crontabs': Permission denied
find: '/var/lib/udisks2': Permission denied
/var/lib/dpkg/info/bandit7.password
find: '/var/lib/snapd/void': Permission denied
find: '/var/lib/snapd/cookie': Permission denied
find: '/var/lib/ubuntu-advantage/apt-esm/var/lib/apt/lists/partial': Permission denied
find: '/var/lib/private': Permission denied
find: '/var/lib/update-notifier/package-data-downloads/partial': Permission denied
find: '/var/lib/amazon': Permission denied
```

Now by using simply the cat command we can access bandit7:

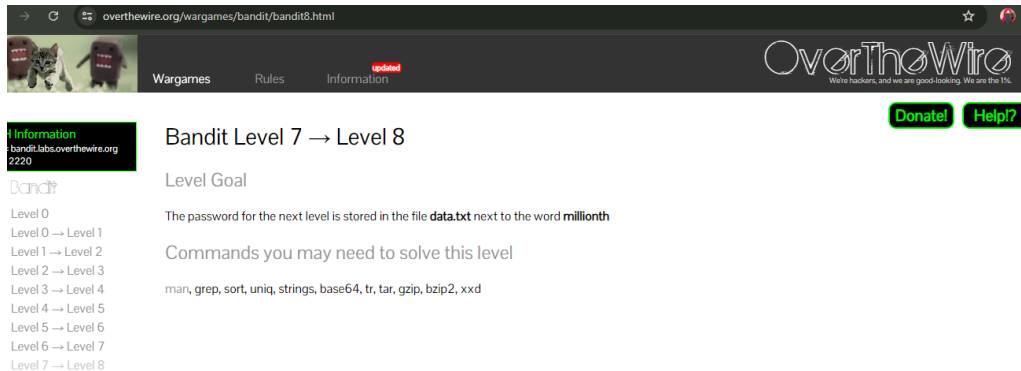
```
bandit6@bandit:~$ cat /var/lib/dpkg/info/bandit7.password
morbNTDkSW6jIlUc0ymOdMaLnOlFVAaj
bandit6@bandit:~$
```


After entering the password we are in bandit7 shell:

```
Enjoy your stay!

bandit7@bandit:~$
```

Level 7-8:



Here we are given the hint that password is in the file named **data.txt** and is written next to the word **millionth**. So it means we have to find the word **millionth**, for this purpose we will use the **grep** command.

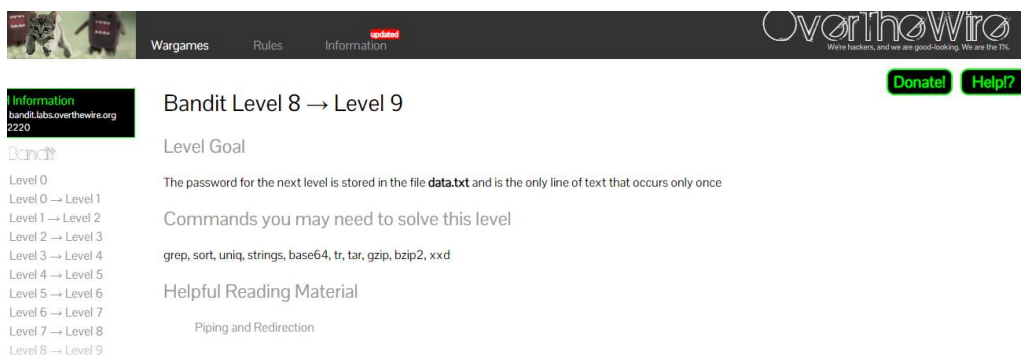
```
bandit7@bandit:~$ cat data.txt | grep millionth
millionth dfwvzFQi4mU0wfNbFOe9RoWskMLg7eEc
bandit7@bandit:~$
```

And yes!! Here is the password for bandit 8. Now after entering the password using ssh command we are in bandit8 shell:

```
Enjoy your stay!

bandit8@bandit:~$
```

Level 8-9:



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Here we are hinted that the password is in file named **data.txt** but the solid hint is that the file contains many repetitive statements and the password is only unique statement which does not repeat, so we will use **sort** and **uniq** command to sort out the password.

```
bandit8@bandit:~$ cat data.txt | sort | uniq -u
4CKMh1JI91bUIZZPXqGana14xvAg0JM
bandit8@bandit:~$
```

And yes here is the password for bandit9, so we can now access the bandit9 shell:

Enjoy your stay!

```
bandit9@bandit:~$
```

Level 9-10:

[Wargames](#) [Rules](#) [Information](#) ^{updated}

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Bandit Level 9 → Level 10

Level Goal

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.

Commands you may need to solve this level

grep, sort, uniq, strings, base64, tr, tar, gzip, bzip2, xxd

So here we again the password is in **data.txt** but this time we are given the hint that password is preceded by several = characters.

So again I am using the **grep** command here:

```
bandit9@bandit:~$ strings data.txt | grep =
=aA"f
\!;===== the
PWAf=1
      M),\}=
2Y6=
G';?e=
===== passwordf
===== isc
*=N6
m=</
E=Bty
=sw
"M1=
===== FGUW5ilLVJrxX9kMYMm1N4MgbpfMiqey
!&=u&4$
*XA=
bandit9@bandit:~$
```

Now we have the password so we can login to level 10 using ssh:

```
Enjoy your stay!  
bandit10@bandit:~$
```

And yes!!!! Here we are in bandit10 shell.