Network Fundamentals

Linux Fundamentals Part 1

Task 1:

No answer needed

Task 2:

Answer the questions below

Research: What year was the first release of a Linux operating system?

1991 ✓ Correct Answer

Task 3:

No answer needed

Task 4:

```
tryhackme@linux1:~$ whoami
tryhackme
```

Answer the questions below

If we wanted to output the text "**TryHackMe**", what would our command be?

echo TryHackMe ✓ Correct Answer Hint

What is the username of who you're logged in as on your deployed Linux machine?

tryhackme ✓ Correct Answer Hint

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Task 4:

Command	Full Name
ls	listing
cd	change directory
cat	concatenate
pwd	print working directory

1. Used "**ls**" to let us know what files are available in the "Documents" folder of this machine. In this case, it is called "todo.txt".
2. We have then used `cat todo.txt` to concatenate/output the contents of this "todo.txt" file, where the contents are "Here's something important for me to do later!"

Using "pwd" to list the full path of the current directory

```
tryhackme@linux1:~/Documents$ pwd
/home/ubuntu/Documents
tryhackme@linux1:~/Documents$
```

Let's break this down:

1. We already know we're in "Documents" thanks to our terminal, but at this point in time, we have no idea where "Documents" is stored so that we can get back to it easily in the future.
2. I have used the "**pwd**" (**p**rint **w**orking **d**irectory) command to find the full file path of this "Documents" folder.
3. We're helpfully told by Linux that this "Documents" directory is stored at "/home/ubuntu/Documents" on the machine — great to know!
4. Now in the future, if we find ourselves in a different location, we can just use `cd /home/ubuntu/Documents` to change our working directory to this "Documents" directory.

Task 5:

```
tryhackme@linux1:~$ ls
access.log  folder1  folder2  folder3  folder4
tryhackme@linux1:~$ cd folder1
tryhackme@linux1:~/folder1$ ls
tryhackme@linux1:~/folder1$ cd ..
tryhackme@linux1:~$ cd folder2
tryhackme@linux1:~/folder2$ ls
tryhackme@linux1:~/folder2$ cd ..
tryhackme@linux1:~$ cd folder4
tryhackme@linux1:~/folder4$ ls
note.txt
tryhackme@linux1:~/folder4$ cat note.txt
Hello World!
```


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```
tryhackme@linux1:~/folder4$ pwd
/home/tryhackme/folder4
```

Answer the questions below

On the Linux machine that you deploy, how many folders are there?

4 ✓ Correct Answer

Which directory contains a file?

folder4 ✓ Correct Answer Hint

What is the contents of this file?

Hello World ✓ Correct Answer

Use the cd command to navigate to this file and find out the new current working directory. What is the path?

/home/tryhackme/folder4 ✓ Correct Answer

Task 6:

```
tryhackme@linux1:~$ find -name *.txt
./folder4/note.txt
```

Using "grep" to find any entries with the IP address of "81.143.211.90" in "access.log"

```
tryhackme@linux1:~$ grep "81.143.211.90" access.log
81.143.211.90 - - [25/Mar/2021:11:17 +0000] "GET / HTTP/1.1" 200 417 "-
" "Mozilla/5.0 (Linux; Android 7.0; Moto G(4))"
```

```
tryhackme@linux1:~$ grep "THM" access.log
13.127.130.212 - - [04/May/2021:08:35:26 +0000] "GET THM{ACCESS} lang=en HTTP/
1.1" 404 360 "-" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36
 (KHTML, like Gecko) Chrome/77.0.3865.120 Safari/537.36"
```

Answer the questions below

Use grep on "access.log" to find the flag that has a prefix of "THM". What is the flag?

THM{ACCESS} ✓ Correct Answer Hint

And I still haven't found what I'm looking for!

No answer needed ✓ Correct Answer

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Task 7:

Using the > Operator

```
tryhackme@linux1:~$ echo hey > welcome
```

Using cat to output the "welcome" file

```
tryhackme@linux1:~$ cat welcome
hey
```

> *Note: If the file i.e. "welcome" already exists, the contents will be overwritten!*

Following on with our previous example where we have the file "welcome" that has the contents of "hey". If were to use echo to add "hello" to the file using the `>` operator, the file will now only have "hello" and not "hey".

The `>>` operator allows to append the output to the bottom of the file — rather than replacing the contents like so:

Using the >> Operator

```
tryhackme@linux1:~$ echo hello >> welcome
```

Using cat to output the "welcome" file

```
tryhackme@linux1:~$ cat welcome
hey
hello
```


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Answer the questions below

If we wanted to run a command in the background, what operator would we want to use?

& ✓ Correct Answer

If I wanted to replace the contents of a file named "passwords" with the word "password123", what would my command be?

echo password123 > passwords ✓ Correct Answer Hint

Now if I wanted to add "tryhackme" to this file named "passwords" but also keep "passwords123", what would my command be

echo tryhackme >> passwords ✓ Correct Answer Hint

Now use the deployed Linux machine to put these into practice

No answer needed ✓ Correct Answer

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