LAPORAN

KUIZ

KEAMANAN SISTEM DAN JARINGAN KOMPUTER

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TEKNOLOGI INFORMASI

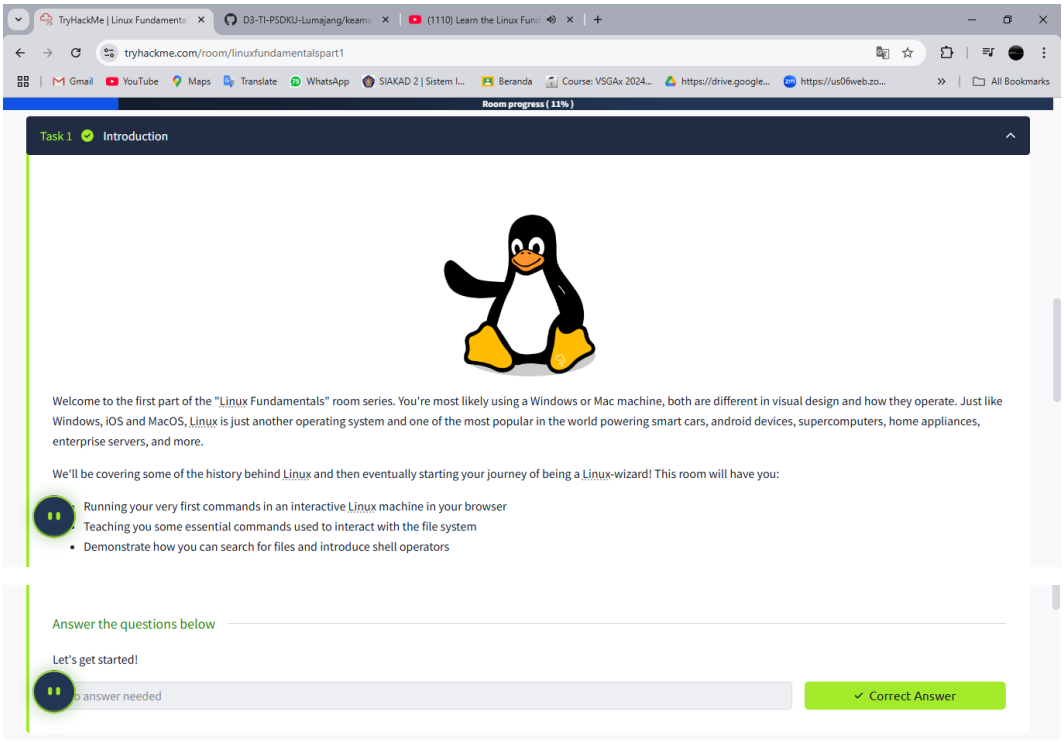
POLITEKNIK NEGERI MALANG

PSDKU LUMAJANG

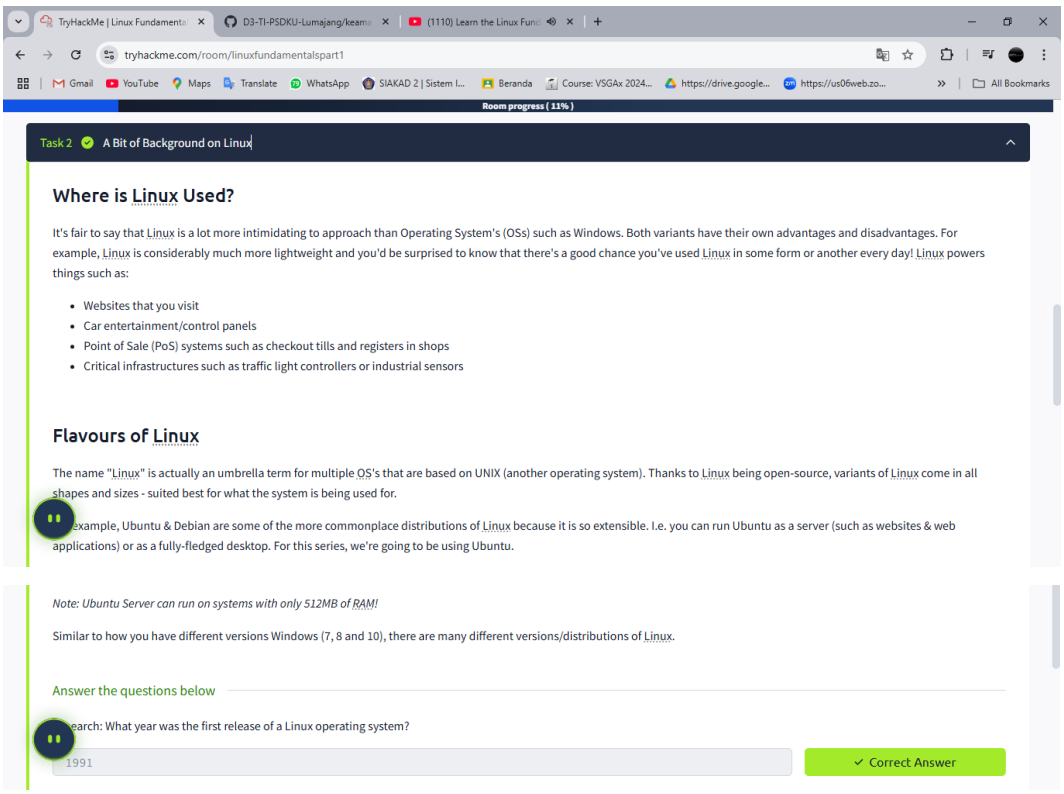
2025

Linux Fundamentals

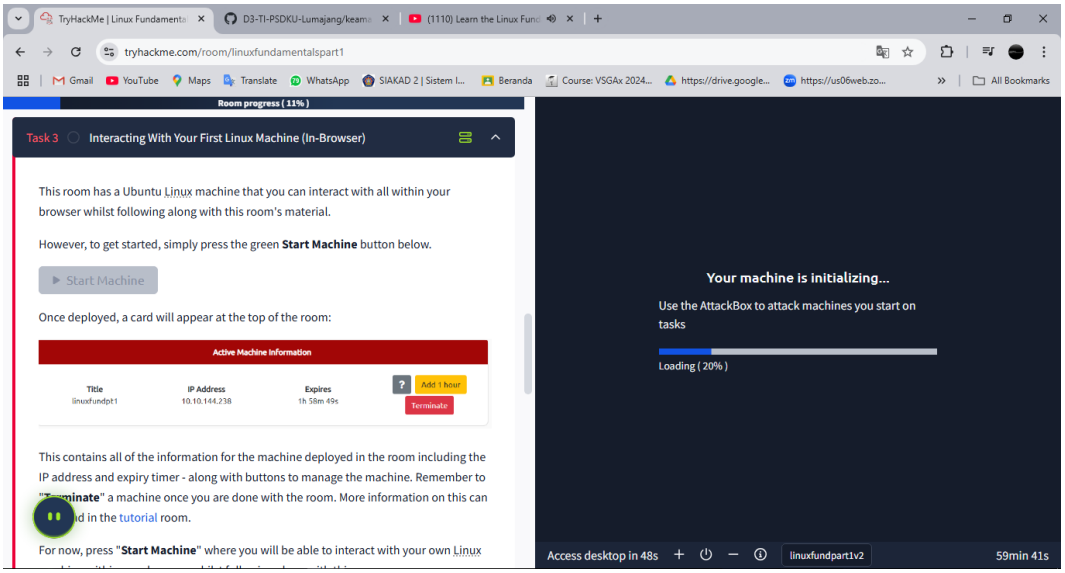
1. Task 1

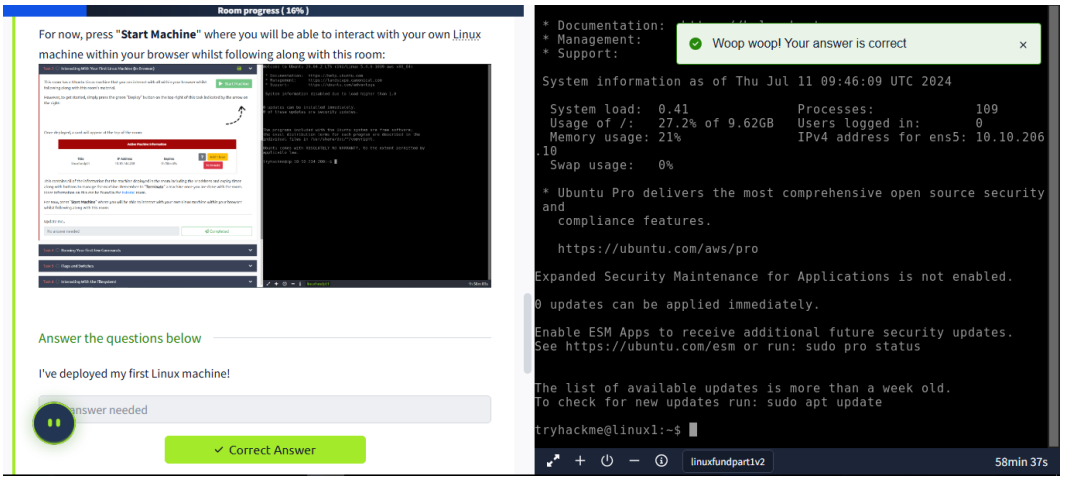


2. Task 2

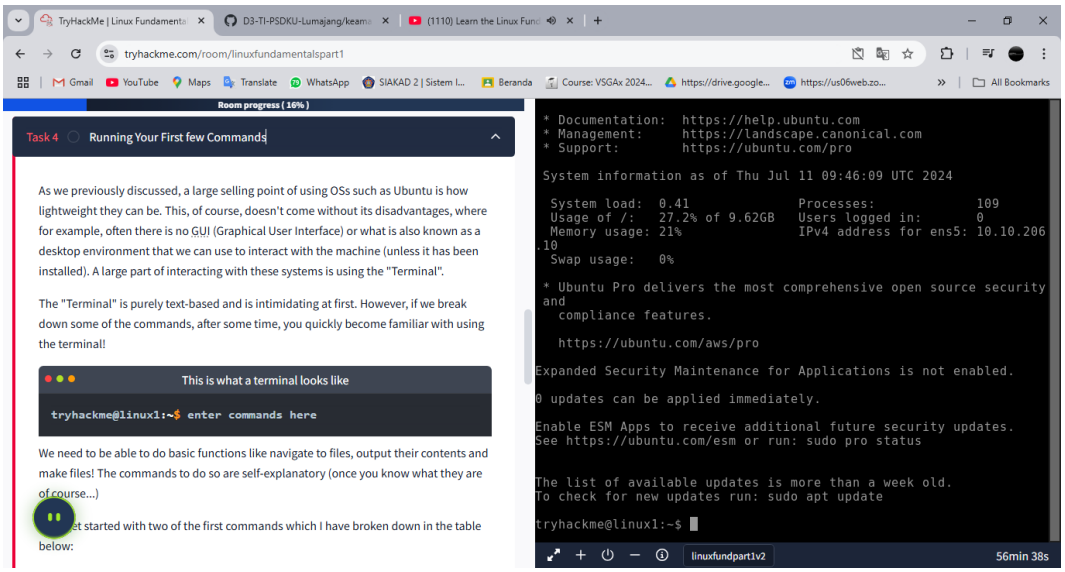


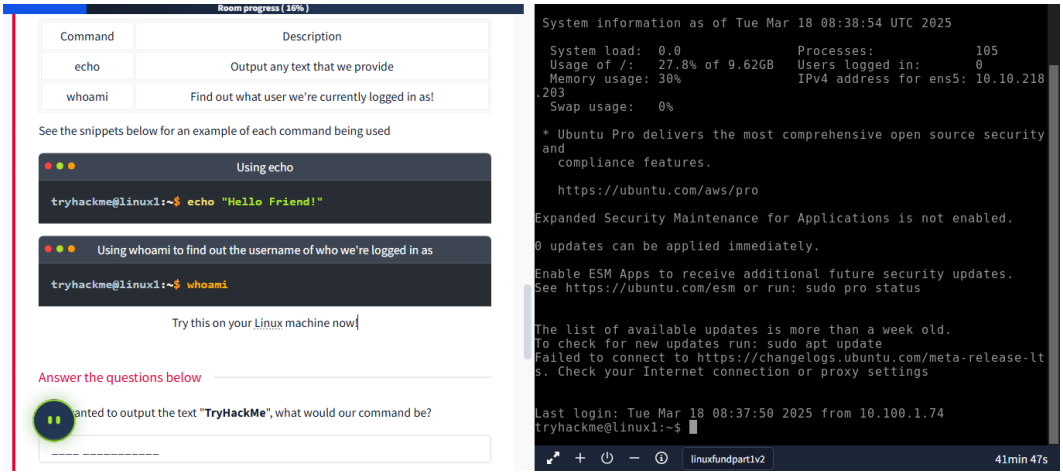
3. Task 3

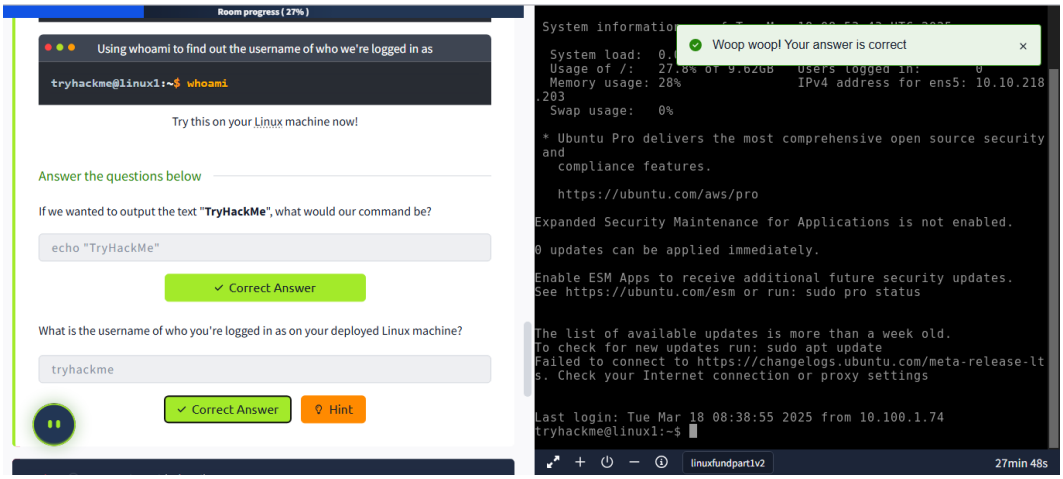




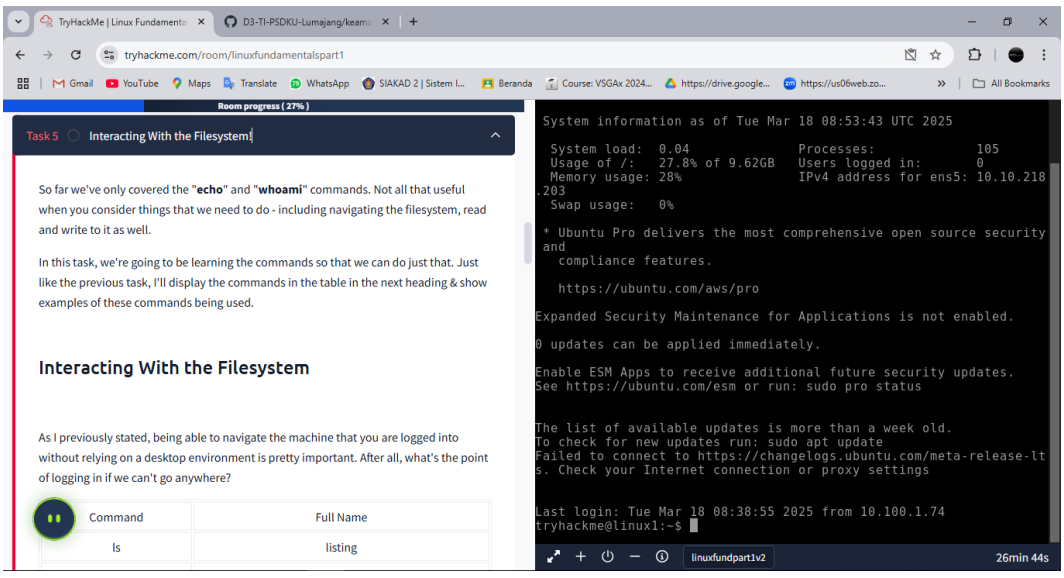
4. Task 4




Room progress (16%)
Command
Description
echo
Output any text that we provide
whoami
Find out what user we're currently logged in as!
See the snippets below for an example of each command being used
Using echo
tryhackme@linux1:~$ echo "Hello Friend!"
Using whoami to find out the username of who we're logged in as
tryhackme@linux1:~$ whoami
Try this on your Linux machine now!
Answer the questions below
anted to output the text "TryHackMe", what would our command be?
System information as of Tue Mar 18 08:38:54 UTC 2025
System load: 0.0
Processes: 105
Usage of /: 27.8% of 9.62GB
Users logged in: 0
Memory usage: 30%
IPv4 address for ens5: 10.10.218.203
Swap usage: 0%
* Ubuntu Pro delivers the most comprehensive open source security and compliance features.
https://ubuntu.com/aws/pro
Expanded Security Maintenance for Applications is not enabled.
0 updates can be applied immediately.
Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status
The list of available updates is more than a week old.
To check for new updates run: sudo apt update
Failed to connect to https://changelogs.ubuntu.com/meta-release-lts. Check your Internet connection or proxy settings
Last login: Tue Mar 18 08:37:50 2025 from 10.100.1.74
tryhackme@linux1:~$
linuxfundpart1v2
41min 47s


Room progress (27%)
Using whoami to find out the username of who we're logged in as
tryhackme@linux1:~$ whoami
Try this on your Linux machine now!
Answer the questions below
If we wanted to output the text "TryHackMe", what would our command be?
echo "TryHackMe"
Correct Answer
What is the username of who you're logged in as on your deployed Linux machine?
tryhackme
Correct Answer
Hint
Woop woop! Your answer is correct
System information as of Tue Mar 18 08:38:55 UTC 2025
Last login: Tue Mar 18 08:38:55 2025 from 10.100.1.74
tryhackme@linux1:~$
linuxfundpart1v2
27min 48s

5. Task 5


TryHackMe | Linux Fundamenta
D3-TI-PSDKU-Lumajang/keam
tryhackme.com/room/linuxfundamentalspart1
Gmail
YouTube
Maps
Translate
WhatsApp
SIAKAD 2 | Sistem I...
Beranda
Course: VSGAx 2024...
https://drive.google...
https://us06web.zo...
All Bookmarks
Room progress (27%)
Task 5
Interacting With the Filesystem
So far we've only covered the "echo" and "whoami" commands. Not all that useful when you consider things that we need to do - including navigating the filesystem, read and write to it as well.
In this task, we're going to be learning the commands so that we can do just that. Just like the previous task, I'll display the commands in the table in the next heading & show examples of these commands being used.
Interacting With the Filesystem
As I previously stated, being able to navigate the machine that you are logged into without relying on a desktop environment is pretty important. After all, what's the point of logging in if we can't go anywhere?
Command
Full Name
ls
listing
System information as of Tue Mar 18 08:53:43 UTC 2025
Last login: Tue Mar 18 08:38:55 2025 from 10.100.1.74
tryhackme@linux1:~$
linuxfundpart1v2
26min 44s

Room progress (27%)

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

Listing Files in Our Current Directory (ls)

Before we can do anything such as finding out the contents of any files or folders, we need to know what exists in the first place. This can be done using the "ls" command (short for listing)

Using "ls" to list the contents of the current directory

```
tryhackme@linux1:~$ ls
'Important Files' 'My Documents' Notes Pictures
```

```
System information as of Tue Mar 18 08:53:43 UTC 2025

  System load:  0.04              Processes:             105
  Usage of /:   27.8% of 9.62GB   Users logged in:       0
  Memory usage: 28%               IPv4 address for ens5: 10.10.218
.203
  Swap usage:   0%

 * Ubuntu Pro delivers the most comprehensive open source security
 and
   compliance features.

   https://ubuntu.com/aws/pro

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status


The list of available updates is more than a week old.
To check for new updates run: sudo apt update
Failed to connect to https://changelogs.ubuntu.com/meta-release-lt
s. Check your Internet connection or proxy settings


Last login: Tue Mar 18 08:38:55 2025 from 10.100.1.74
tryhackme@linux1:~$
```

linuxfundpart1v2 26min 21s

Room progress (27%)

In the screenshot above, we can see there are the following directories/folders:

- Important Files
- My Documents
- Notes
- Pictures

Great! You can probably take a guess as to what to expect a folder to contain given by its name.

Pro tip: You can list the contents of a directory without having to navigate to it by using ls and the name of the directory. I.e. `ls Pictures`

Changing Our Current Directory (cd)

Now that we know what folders exist, we need to use the "**cd**" command (short for **c**hange **d**irectory) to change to that directory. Say if I wanted to open the "Pictures" ...ory - I'd do "**cd Pictures**". Where again, we want to find out the contents of this ...es" directory and to do so, we'd use "**ls**" again:

Listing our new directory after we have used " cd "

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

```
System information as of Tue Mar 18 08:53:43 UTC 2025

  System load:  0.04              Processes:             105
  Usage of /:   27.8% of 9.62GB   Users logged in:       0
  Memory usage: 28%               IPv4 address for ens5: 10.10.218
.203
  Swap usage:   0%

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Expanded Security Maintenance for Applications is not enabled.

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The list of available updates is more than a week old.
To check for new updates run: sudo apt update
Failed to connect to https://changelogs.ubuntu.com/meta-release-lt
s. Check your Internet connection or proxy settings


Last login: Tue Mar 18 08:38:55 2025 from 10.100.1.74
tryhackme@linux1:~$
```

linuxfundpart1v2 25min 41s

Room progress (27%)

Listing our new directory after we have used " cd "

```
tryhackme@linux1:~/Pictures$ ls
dog_picture1.jpg dog_picture2.jpg dog_picture3.jpg dog_picture4.j
```

In this case, it looks like there are 4 pictures of dogs!

Outputting the Contents of a File (cat)

Whilst knowing about the existence of files is great — it's not all that useful unless we're able to view the contents of them.

We will come on to discuss some of the tools available to us that allows us to transfer files from one machine to another in a later room. But for now, we're going to talk about simply seeing the contents of text files using a command called "**cat**".

"Cat" is short for concatenating & is a fantastic way for us to output the contents of files (not just text files!).

...screenshot below, you can see how I have combined the use of "ls" to list the files ...a directory called "Documents":

Using "ls" to to list the contents of the current directory

```
System information as of Tue Mar 18 08:53:43 UTC 2025

  System load:  0.04              Processes:             105
  Usage of /:   27.8% of 9.62GB   Users logged in:       0
  Memory usage: 28%               IPv4 address for ens5: 10.10.218
.203
  Swap usage:   0%

 * Ubuntu Pro delivers the most comprehensive open source security
 and
   compliance features.

   https://ubuntu.com/aws/pro

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status


The list of available updates is more than a week old.
To check for new updates run: sudo apt update
Failed to connect to https://changelogs.ubuntu.com/meta-release-lt
s. Check your Internet connection or proxy settings


Last login: Tue Mar 18 08:38:55 2025 from 10.100.1.74
tryhackme@linux1:~$
```

linuxfundpart1v2 25min 10s

Room progress (27%)

Using "ls" to to list the contents of the current directory

```
tryhackme@linux1:~/Documents$ ls
todo.txt
tryhackme@linux1:~/Documents$ cat todo.txt
Here's something important for me to do later!
```

We've applied some knowledge from earlier in this task to do the following:

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!"

Pro tip: You can use cat to output the contents of a file within directories without having to navigate to it by using cat and the name of the directory. I.e. `cat /home/ubuntu/Documents/todo.txt`

Sometimes things like usernames, passwords (yes - really...), flags or configuration

```
System information as of Tue Mar 18 08:53:43 UTC 2025

  System load:  0.04              Processes:             105
  Usage of /:   27.8% of 9.62GB   Users logged in:       0
  Memory usage: 28%               IPv4 address for ens5: 10.10.218
.203
  Swap usage:   0%

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and
   compliance features.

   https://ubuntu.com/aws/pro

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
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The list of available updates is more than a week old.
To check for new updates run: sudo apt update
Failed to connect to https://changelogs.ubuntu.com/meta-release-lt
s. Check your Internet connection or proxy settings


Last login: Tue Mar 18 08:38:55 2025 from 10.100.1.74
tryhackme@linux1:~$
```

linuxfundpart1v2 — 24min 35s

Room progress (27%)

Sometimes things like usernames, passwords (yes - really...), flags or configuration settings are stored within files where "cat" can be used to retrieve these.

Finding out the full Path to our Current Working Directory (pwd)

You'll notice as you progress through navigating your Linux machine, the name of the directory that you are currently working in will be listed in your terminal.

It's easy to lose track of where we are on the filesystem exactly, which is why I want to introduce "**pwd**". This stands for **p**rint **w**orking **d**irectory.

Using the example machine from before, we are currently in the "Documents" folder — but where is this exactly on the Linux machine's filesystem? We can find this out using this "pwd" command like within the screenshot below:

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


```
System information as of Tue Mar 18 08:53:43 UTC 2025

  System load:  0.04              Processes:             105
  Usage of /:   27.8% of 9.62GB   Users logged in:       0
  Memory usage: 28%               IPv4 address for ens5: 10.10.218
.203
  Swap usage:   0%

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and
   compliance features.

   https://ubuntu.com/aws/pro

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status


The list of available updates is more than a week old.
To check for new updates run: sudo apt update
Failed to connect to https://changelogs.ubuntu.com/meta-release-lt
s. Check your Internet connection or proxy settings


Last login: Tue Mar 18 08:38:55 2025 from 10.100.1.74
tryhackme@linux1:~$
```

linuxfundpart1v2 — 24min 8s

Room progress (33%)

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.

Answer the questions below

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

4

✓ Correct Answer


```
  System load:  0.0
  Usage of /:   27
  Memory usage: 28
.203
  Swap usage:   0%

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and
   compliance features.

   https://ubuntu.com/aws/pro

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status


The list of available updates is more than a week old.
To check for new updates run: sudo apt update
Failed to connect to https://changelogs.ubuntu.com/meta-release-lt
s. Check your Internet connection or proxy settings


Last login: Tue Mar 18 08:38:55 2025 from 10.100.1.74
tryhackme@linux1:~$ ls
access.log  folder1  folder2  folder3  folder4
tryhackme@linux1:~$
```
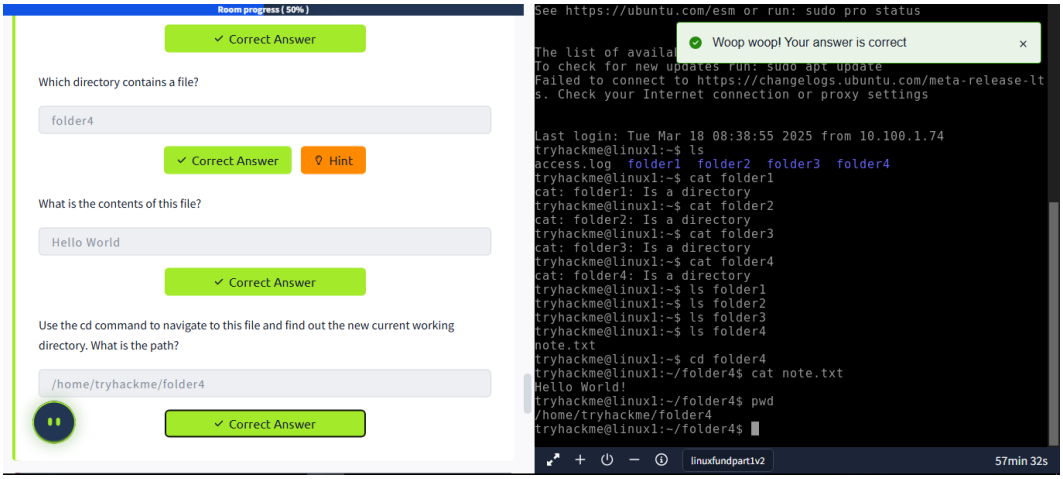
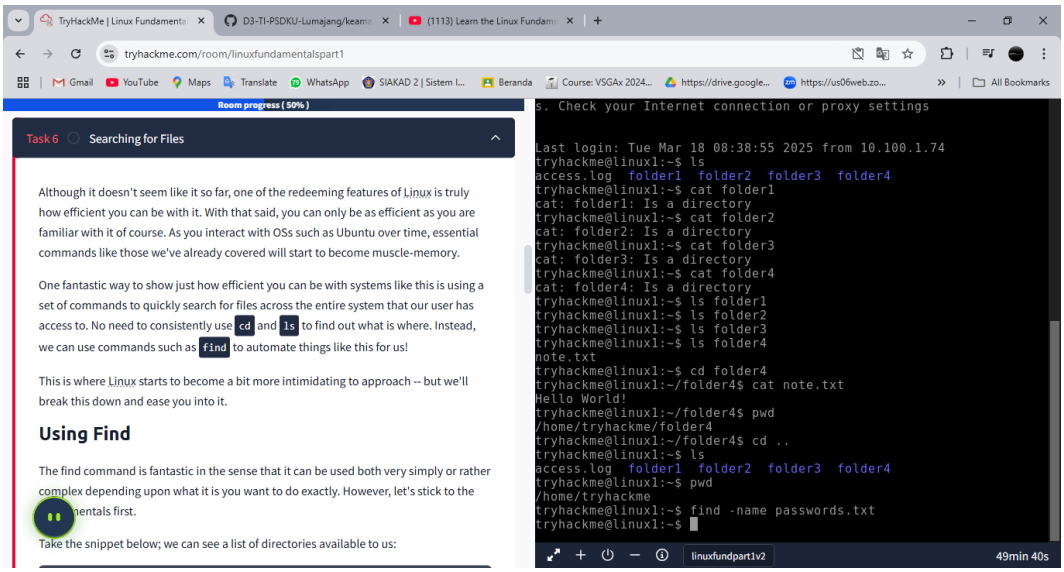


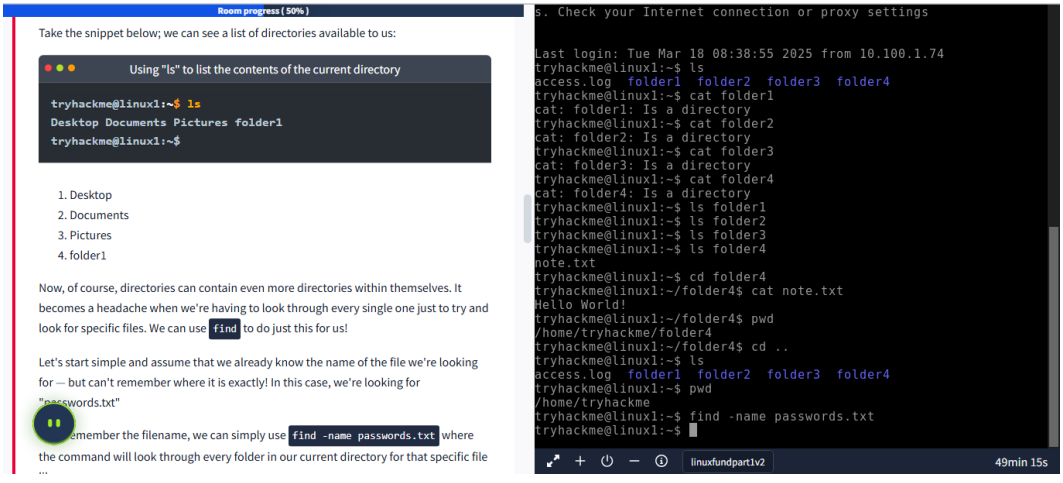
Woop woop! Your answer is correct ×

linuxfundpart1v2 — 1h 2min 58s


Room progress (50%)
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
Woop woop! Your answer is correct
See https://ubuntu.com/esm or run: sudo pro status
To check for new updates run: sudo apt update
Failed to connect to https://changelogs.ubuntu.com/meta-release-lt
s. Check your Internet connection or proxy settings
Last login: Tue Mar 18 08:38:55 2025 from 10.100.1.74
tryhackme@linux1:~$ ls
access.log folder1 folder2 folder3 folder4
tryhackme@linux1:~$ cat folder1
cat: folder1: Is a directory
tryhackme@linux1:~$ cat folder2
cat: folder2: Is a directory
tryhackme@linux1:~$ cat folder3
cat: folder3: Is a directory
tryhackme@linux1:~$ cat folder4
cat: folder4: Is a directory
tryhackme@linux1:~$ ls folder1
tryhackme@linux1:~$ ls folder2
tryhackme@linux1:~$ ls folder3
tryhackme@linux1:~$ ls folder4
note.txt
tryhackme@linux1:~$ cd folder4
tryhackme@linux1:~/folder4$ cat note.txt
Hello World!
tryhackme@linux1:~/folder4$ pwd
/home/tryhackme/folder4
tryhackme@linux1:~/folder4$
linuxfundpart1v2
57min 32s

6. Task 6


TryHackMe | Linux Fundamenta
tryhackme.com/room/linuxfundamentalspart1
Room progress (50%)
Task 6 Searching for Files
Although it doesn't seem like it so far, one of the redeeming features of Linux is truly how efficient you can be with it. With that said, you can only be as efficient as you are familiar with it of course. As you interact with OSs such as Ubuntu over time, essential commands like those we've already covered will start to become muscle-memory.
One fantastic way to show just how efficient you can be with systems like this is using a set of commands to quickly search for files across the entire system that our user has access to. No need to consistently use cd and ls to find out what is where. Instead, we can use commands such as find to automate things like this for us!
This is where Linux starts to become a bit more intimidating to approach -- but we'll break this down and ease you into it.
Using Find
The find command is fantastic in the sense that it can be used both very simply or rather complex depending upon what it is you want to do exactly. However, let's stick to the
mentals first.
Take the snippet below; we can see a list of directories available to us:
s. Check your Internet connection or proxy settings
Last login: Tue Mar 18 08:38:55 2025 from 10.100.1.74
tryhackme@linux1:~$ ls
access.log folder1 folder2 folder3 folder4
tryhackme@linux1:~$ cat folder1
cat: folder1: Is a directory
tryhackme@linux1:~$ cat folder2
cat: folder2: Is a directory
tryhackme@linux1:~$ cat folder3
cat: folder3: Is a directory
tryhackme@linux1:~$ cat folder4
cat: folder4: Is a directory
tryhackme@linux1:~$ ls folder1
tryhackme@linux1:~$ ls folder2
tryhackme@linux1:~$ ls folder3
tryhackme@linux1:~$ ls folder4
note.txt
tryhackme@linux1:~$ cd folder4
tryhackme@linux1:~/folder4$ cat note.txt
Hello World!
tryhackme@linux1:~/folder4$ pwd
/home/tryhackme/folder4
tryhackme@linux1:~/folder4$ cd ..
tryhackme@linux1:~$ ls
access.log folder1 folder2 folder3 folder4
tryhackme@linux1:~$ pwd
/home/tryhackme
tryhackme@linux1:~$ find -name passwords.txt
tryhackme@linux1:~$
linuxfundpart1v2
49min 40s


Room progress (50%)
Take the snippet below; we can see a list of directories available to us:
Using "ls" to list the contents of the current directory
tryhackme@linux1:~$ ls
Desktop Documents Pictures folder1
tryhackme@linux1:~$
1. Desktop
2. Documents
3. Pictures
4. folder1
Now, of course, directories can contain even more directories within themselves. It becomes a headache when we're having to look through every single one just to try and look for specific files. We can use find to do just this for us!
Let's start simple and assume that we already know the name of the file we're looking for — but can't remember where it is exactly! In this case, we're looking for
"passwords.txt"
emember the filename, we can simply use find -name passwords.txt where the command will look through every folder in our current directory for that specific file
s. Check your Internet connection or proxy settings
Last login: Tue Mar 18 08:38:55 2025 from 10.100.1.74
tryhackme@linux1:~$ ls
access.log folder1 folder2 folder3 folder4
tryhackme@linux1:~$ cat folder1
cat: folder1: Is a directory
tryhackme@linux1:~$ cat folder2
cat: folder2: Is a directory
tryhackme@linux1:~$ cat folder3
cat: folder3: Is a directory
tryhackme@linux1:~$ cat folder4
cat: folder4: Is a directory
tryhackme@linux1:~$ ls folder1
tryhackme@linux1:~$ ls folder2
tryhackme@linux1:~$ ls folder3
tryhackme@linux1:~$ ls folder4
note.txt
tryhackme@linux1:~$ cd folder4
tryhackme@linux1:~/folder4$ cat note.txt
Hello World!
tryhackme@linux1:~/folder4$ pwd
/home/tryhackme/folder4
tryhackme@linux1:~/folder4$ cd ..
tryhackme@linux1:~$ ls
access.log folder1 folder2 folder3 folder4
tryhackme@linux1:~$ pwd
/home/tryhackme
tryhackme@linux1:~$ find -name passwords.txt
tryhackme@linux1:~$
linuxfundpart1v2
49min 15s

Room progress (50%)

If we remember the filename, we can simply use `find -name passwords.txt` where the command will look through every folder in our current directory for that specific file like so:

Using "find" to find a file with the name of "passwords.txt"

```
tryhackme@linux1:~$ find -name passwords.txt
./folder1/passwords.txt
tryhackme@linux1:~$
```

"Find" has managed to *find* the file — it turns out it is located in folder1/passwords.txt — sweet. But let's say that we don't know the name of the file, or want to search for every file that has an extension such as ".txt". Find let's us do that too!

We can simply use what's known as a wildcard (*) to search for anything that has .txt at the end. In our case, we want to find every .txt file that's in our current directory. We will construct a command such as `find -name *.txt` . Where "Find" has been able to *find* every .txt file and has then given us the location of each one:

Using "find" to find any file with the extension of ".txt"

```
tryhackme@linux1:~$ find -name *.txt
./folder1/passwords.txt
```

Room progress (50%)

Using "find" to find any file with the extension of ".txt"

```
tryhackme@linux1:~$ find -name *.txt
./folder1/passwords.txt
./Documents/todo.txt
tryhackme@linux1:~$
```

Find has managed to *find*:

1. "passwords.txt" located within "folder1"
2. "todo.txt" located within "Documents"

That wasn't so tough, huh!

Using Grep

Another great utility that is a great one to learn about is the use of `grep` . The `grep` command allows us to search the contents of files for specific values that we are looking

Take for example, the access log of a web server. In this case, the access.log of a web server has 244 entries.

Room progress (50%)

Take for example, the access log of a web server. In this case, the access.log of a web server has 244 entries.

Using "wc" to count the number of entries in "access.log"

```
tryhackme@linux1:~$ wc -l access.log
244 access.log
tryhackme@linux1:~$
```

Using a command like `cat` isn't going to cut it too well here. Let's say for example if we wanted to search this log file to see the things that a certain user/IP address visited? Looking through 244 entries isn't all that efficient considering we want to find a specific value.

We can use `grep` to search the entire contents of this file for any entries of the value that we are searching for. Going with the example of a web server's access log, we want to see everything that the IP address "81.143.211.90" has visited (note that this is fictional)

"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
```

```
s. Check your Internet connection or proxy settings

Last login: Tue Mar 18 08:38:55 2025 from 10.100.1.74
tryhackme@linux1:~$ ls
access.log  folder1  folder2  folder3  folder4
tryhackme@linux1:~$ cat folder1
cat: folder1: Is a directory
tryhackme@linux1:~$ cat folder2
cat: folder2: Is a directory
tryhackme@linux1:~$ cat folder3
cat: folder3: Is a directory
tryhackme@linux1:~$ cat folder4
cat: folder4: Is a directory
tryhackme@linux1:~$ ls folder1
tryhackme@linux1:~$ ls folder2
tryhackme@linux1:~$ ls folder3
tryhackme@linux1:~$ ls folder4
note.txt
tryhackme@linux1:~$ cd folder4
tryhackme@linux1:~/folder4$ cat note.txt
Hello World!
tryhackme@linux1:~/folder4$ pwd
/home/tryhackme/folder4
tryhackme@linux1:~/folder4$ cd ..
tryhackme@linux1:~$ ls
access.log  folder1  folder2  folder3  folder4
tryhackme@linux1:~$ pwd
/home/tryhackme
tryhackme@linux1:~$ find -name passwords.txt
tryhackme@linux1:~$
```

linuxfundpart1v2 48min 39s

s. Check your Internet connection or proxy settings

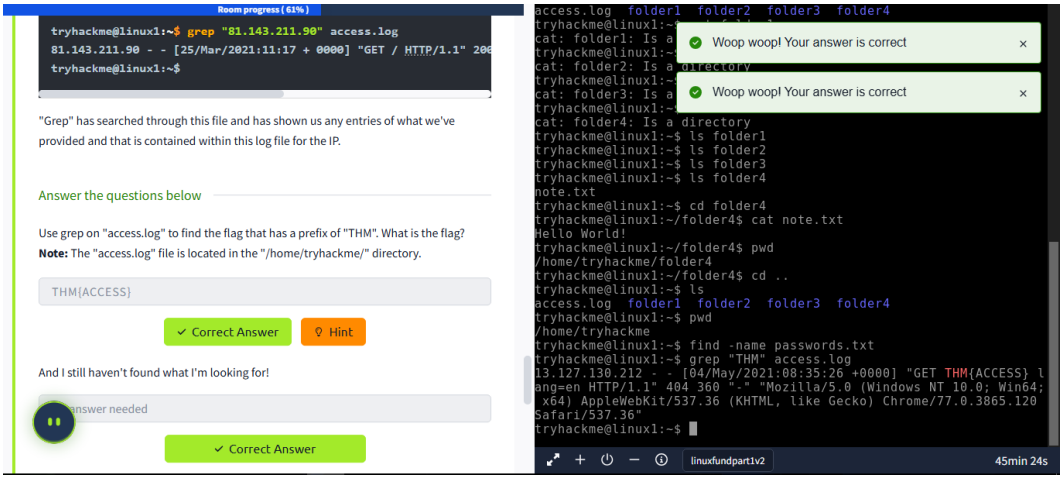
Last login: Tue Mar 18 08:38:55 2025 from 10.100.1.74
tryhackme@linux1:~$ ls
access.log folder1 folder2 folder3 folder4
tryhackme@linux1:~$ cat folder1
cat: folder1: Is a directory
tryhackme@linux1:~$ cat folder2
cat: folder2: Is a directory
tryhackme@linux1:~$ cat folder3
cat: folder3: Is a directory
tryhackme@linux1:~$ cat folder4
cat: folder4: Is a directory
tryhackme@linux1:~$ ls folder1
tryhackme@linux1:~$ ls folder2
tryhackme@linux1:~$ ls folder3
tryhackme@linux1:~$ ls folder4
note.txt
tryhackme@linux1:~$ cd folder4
tryhackme@linux1:~/folder4$ cat note.txt
Hello World!
tryhackme@linux1:~/folder4$ pwd
/home/tryhackme/folder4
tryhackme@linux1:~/folder4$ cd ..
tryhackme@linux1:~$ ls
access.log folder1 folder2 folder3 folder4
tryhackme@linux1:~$ pwd
/home/tryhackme
tryhackme@linux1:~$ find -name passwords.txt
tryhackme@linux1:~$

linuxfundpart1v2 48min 9s

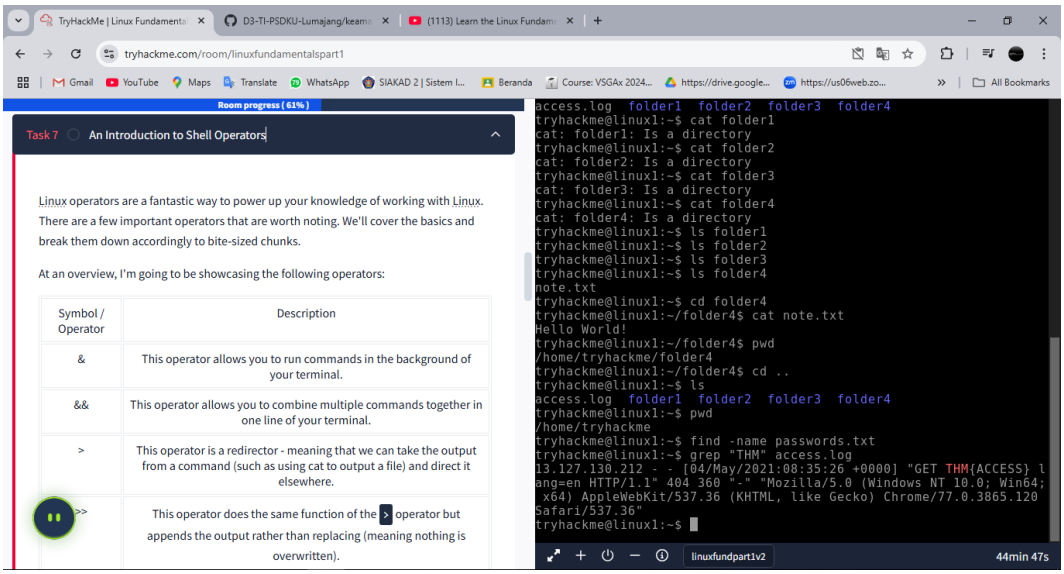
s. Check your Internet connection or proxy settings

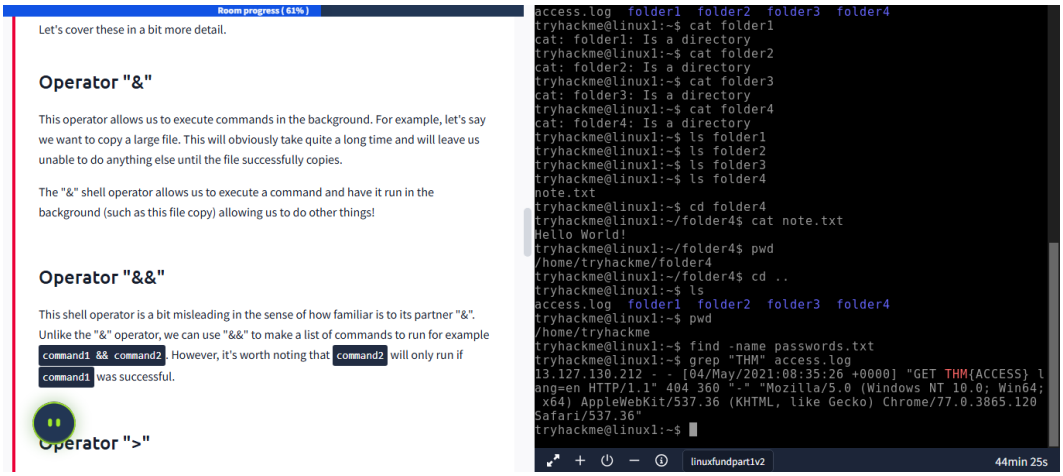
Last login: Tue Mar 18 08:38:55 2025 from 10.100.1.74
tryhackme@linux1:~$ ls
access.log folder1 folder2 folder3 folder4
tryhackme@linux1:~$ cat folder1
cat: folder1: Is a directory
tryhackme@linux1:~$ cat folder2
cat: folder2: Is a directory
tryhackme@linux1:~$ cat folder3
cat: folder3: Is a directory
tryhackme@linux1:~$ cat folder4
cat: folder4: Is a directory
tryhackme@linux1:~$ ls folder1
tryhackme@linux1:~$ ls folder2
tryhackme@linux1:~$ ls folder3
tryhackme@linux1:~$ ls folder4
note.txt
tryhackme@linux1:~$ cd folder4
tryhackme@linux1:~/folder4$ cat note.txt
Hello World!
tryhackme@linux1:~/folder4$ pwd
/home/tryhackme/folder4
tryhackme@linux1:~/folder4$ cd ..
tryhackme@linux1:~$ ls
access.log folder1 folder2 folder3 folder4
tryhackme@linux1:~$ pwd
/home/tryhackme
tryhackme@linux1:~$ find -name passwords.txt
tryhackme@linux1:~$

linuxfundpart1v2 47min 28s


Room progress (61%)
tryhackme@linux1:~$ grep "81.143.211.90" access.log
81.143.211.90 - - [25/Mar/2021:11:17 + 0000] "GET / HTTP/1.1" 200
tryhackme@linux1:~$
"Grep" has searched through this file and has shown us any entries of what we've provided and that is contained within this log file for the IP.
Answer the questions below
Use grep on "access.log" to find the flag that has a prefix of "THM". What is the flag?
Note: The "access.log" file is located in the "/home/tryhackme/" directory.
THM{ACCESS}
Correct Answer
Hint
And I still haven't found what I'm looking for!
Correct Answer
Woop woop! Your answer is correct
Woop woop! Your answer is correct
access.log folder1 folder2 folder3 folder4
tryhackme@linux1:~$ cat folder1
cat: folder1: Is a directory
tryhackme@linux1:~$ cat folder2
cat: folder2: Is a directory
tryhackme@linux1:~$ cat folder3
cat: folder3: Is a directory
tryhackme@linux1:~$ cat folder4
cat: folder4: Is a directory
tryhackme@linux1:~$ ls folder1
tryhackme@linux1:~$ ls folder2
tryhackme@linux1:~$ ls folder3
tryhackme@linux1:~$ ls folder4
note.txt
tryhackme@linux1:~$ cd folder4
tryhackme@linux1:~/folder4$ cat note.txt
Hello World!
tryhackme@linux1:~/folder4$ pwd
/home/tryhackme/folder4
tryhackme@linux1:~/folder4$ cd ..
tryhackme@linux1:~$ ls
access.log folder1 folder2 folder3 folder4
tryhackme@linux1:~$ pwd
/home/tryhackme
tryhackme@linux1:~$ find -name passwords.txt
tryhackme@linux1:~$ grep "THM" access.log
13.127.130.212 - - [04/May/2021:08:35:26 +0000] "GET THM{ACCESS} l
ang=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"
tryhackme@linux1:~$
linuxfundpart1v2
45min 24s

7. Task 7


TryHackMe | Linux Fundamenta
D3-TI-PSDKU-Lumajang/keama
(1113) Learn the Linux Fundame
tryhackme.com/room/linuxfundamentalspart1
Gmail YouTube Maps Translate WhatsApp SIAKAD 2 | Sistem I... Beranda Course: VSGAx 2024... https://drive.google... https://us06web.zo... All Bookmarks
Room progress (61%)
Task 7 An Introduction to Shell Operators
Linux operators are a fantastic way to power up your knowledge of working with Linux. There are a few important operators that are worth noting. We'll cover the basics and break them down accordingly to bite-sized chunks.
At an overview, I'm going to be showcasing the following operators:
Symbol / Operator
Description
&
This operator allows you to run commands in the background of your terminal.
&&
This operator allows you to combine multiple commands together in one line of your terminal.
>
This operator is a redirector - meaning that we can take the output from a command (such as using cat to output a file) and direct it elsewhere.
>>
This operator does the same function of the > operator but appends the output rather than replacing (meaning nothing is overwritten).
access.log folder1 folder2 folder3 folder4
tryhackme@linux1:~$ cat folder1
cat: folder1: Is a directory
tryhackme@linux1:~$ cat folder2
cat: folder2: Is a directory
tryhackme@linux1:~$ cat folder3
cat: folder3: Is a directory
tryhackme@linux1:~$ cat folder4
cat: folder4: Is a directory
tryhackme@linux1:~$ ls folder1
tryhackme@linux1:~$ ls folder2
tryhackme@linux1:~$ ls folder3
tryhackme@linux1:~$ ls folder4
note.txt
tryhackme@linux1:~$ cd folder4
tryhackme@linux1:~/folder4$ cat note.txt
Hello World!
tryhackme@linux1:~/folder4$ pwd
/home/tryhackme/folder4
tryhackme@linux1:~/folder4$ cd ..
tryhackme@linux1:~$ ls
access.log folder1 folder2 folder3 folder4
tryhackme@linux1:~$ pwd
/home/tryhackme
tryhackme@linux1:~$ find -name passwords.txt
tryhackme@linux1:~$ grep "THM" access.log
13.127.130.212 - - [04/May/2021:08:35:26 +0000] "GET THM{ACCESS} l
ang=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"
tryhackme@linux1:~$
linuxfundpart1v2
44min 47s


Room progress (61%)
Let's cover these in a bit more detail.
Operator "&"
This operator allows us to execute commands in the background. For example, let's say we want to copy a large file. This will obviously take quite a long time and will leave us unable to do anything else until the file successfully copies.
The "&" shell operator allows us to execute a command and have it run in the background (such as this file copy) allowing us to do other things!
Operator "&&"
This shell operator is a bit misleading in the sense of how familiar is to its partner "&". Unlike the "&" operator, we can use "&&" to make a list of commands to run for example command1 && command2. However, it's worth noting that command2 will only run if command1 was successful.
Operator ">"
access.log folder1 folder2 folder3 folder4
tryhackme@linux1:~$ cat folder1
cat: folder1: Is a directory
tryhackme@linux1:~$ cat folder2
cat: folder2: Is a directory
tryhackme@linux1:~$ cat folder3
cat: folder3: Is a directory
tryhackme@linux1:~$ cat folder4
cat: folder4: Is a directory
tryhackme@linux1:~$ ls folder1
tryhackme@linux1:~$ ls folder2
tryhackme@linux1:~$ ls folder3
tryhackme@linux1:~$ ls folder4
note.txt
tryhackme@linux1:~$ cd folder4
tryhackme@linux1:~/folder4$ cat note.txt
Hello World!
tryhackme@linux1:~/folder4$ pwd
/home/tryhackme/folder4
tryhackme@linux1:~/folder4$ cd ..
tryhackme@linux1:~$ ls
access.log folder1 folder2 folder3 folder4
tryhackme@linux1:~$ pwd
/home/tryhackme
tryhackme@linux1:~$ find -name passwords.txt
tryhackme@linux1:~$ grep "THM" access.log
13.127.130.212 - - [04/May/2021:08:35:26 +0000] "GET THM{ACCESS} l
ang=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"
tryhackme@linux1:~$
linuxfundpart1v2
44min 25s

Room progress (61%)

Operator ">"

This operator is what's known as an output redirector. What this essentially means is that we take the output from a command we run and send that output to somewhere else.

A great example of this is redirecting the output of the `echo` command that we learned in Task 4. Of course, running something such as `echo howdy` will return "howdy" back to our terminal — that isn't super useful. What we can do instead, is redirect "howdy" to something such as a new file!

Let's say we wanted to create a file named "welcome" with the message "hey". We can run `echo hey > welcome` where we want the file created with the contents "hey" like so:

Using the > Operator

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

Using cat to output the "welcome" file

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

```
access.log  folder1  folder2  folder3  folder4
tryhackme@linux1:~$ cat folder1
cat: folder1: Is a directory
tryhackme@linux1:~$ cat folder2
cat: folder2: Is a directory
tryhackme@linux1:~$ cat folder3
cat: folder3: Is a directory
tryhackme@linux1:~$ cat folder4
cat: folder4: Is a directory
tryhackme@linux1:~$ ls folder1
tryhackme@linux1:~$ ls folder2
tryhackme@linux1:~$ ls folder3
tryhackme@linux1:~$ ls folder4
note.txt
tryhackme@linux1:~$ cd folder4
tryhackme@linux1:~/folder4$ cat note.txt
Hello World!
tryhackme@linux1:~/folder4$ pwd
/home/tryhackme/folder4
tryhackme@linux1:~/folder4$ cd ..
tryhackme@linux1:~$ ls
access.log  folder1  folder2  folder3  folder4
tryhackme@linux1:~$ pwd
/home/tryhackme
tryhackme@linux1:~$ find -name passwords.txt
tryhackme@linux1:~$ grep "THM" access.log
13.127.130.212 - - [04/May/2021:08:35:26 +0000] "GET THM{ACCESS} l
ang=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"
tryhackme@linux1:~$
```

linuxfundpart1v2 43min 51s

Room progress (61%)

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

Operator ">>"

This operator is also an output redirector like in the previous operator (`>`) we discussed. However, what makes this operator different is that rather than overwriting any contents within a file, for example, it instead just puts the output at the end.

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
```

```
access.log  folder1  folder2  folder3  folder4
tryhackme@linux1:~$ cat folder1
cat: folder1: Is a directory
tryhackme@linux1:~$ cat folder2
cat: folder2: Is a directory
tryhackme@linux1:~$ cat folder3
cat: folder3: Is a directory
tryhackme@linux1:~$ cat folder4
cat: folder4: Is a directory
tryhackme@linux1:~$ ls folder1
tryhackme@linux1:~$ ls folder2
tryhackme@linux1:~$ ls folder3
tryhackme@linux1:~$ ls folder4
note.txt
tryhackme@linux1:~$ cd folder4
tryhackme@linux1:~/folder4$ cat note.txt
Hello World!
tryhackme@linux1:~/folder4$ pwd
/home/tryhackme/folder4
tryhackme@linux1:~/folder4$ cd ..
tryhackme@linux1:~$ ls
access.log  folder1  folder2  folder3  folder4
tryhackme@linux1:~$ pwd
/home/tryhackme
tryhackme@linux1:~$ find -name passwords.txt
tryhackme@linux1:~$ grep "THM" access.log
13.127.130.212 - - [04/May/2021:08:35:26 +0000] "GET THM{ACCESS} l
ang=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"
tryhackme@linux1:~$
```

linuxfundpart1v2 42min 51s

Room progress (83%)

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

```
tryhackme@linux1:~$ ls folder2
tryhackme@linux1:~
tryhackme@linux1:~
note.txt
tryhackme@linux1:~$ cd folder4
tryhackme@linux1:~/folder4$ cat note.txt
Hello World!
tryhackme@linux1:~/folder4$ pwd
/home/tryhackme/folder4
tryhackme@linux1:~/folder4$ cd ..
tryhackme@linux1:~$ ls
access.log  folder1  folder2  folder3  folder4
tryhackme@linux1:~$ pwd
/home/tryhackme
tryhackme@linux1:~$ find -name passwords.txt
tryhackme@linux1:~$ grep "THM" access.log
13.127.130.212 - - [04/May/2021:08:35:26 +0000] "GET THM{ACCESS} l
ang=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"
tryhackme@linux1:~$ echo hey > welcomeBack
tryhackme@linux1:~$ cat welcomeBack
hey
tryhackme@linux1:~$ echo hello >> welcome
tryhackme@linux1:~$ cat welcome
hello
tryhackme@linux1:~$ echo hello >> welcomeBack lcome
tryhackme@linux1:~$ cat welcomeBack
hey
hello
tryhackme@linux1:~$
```

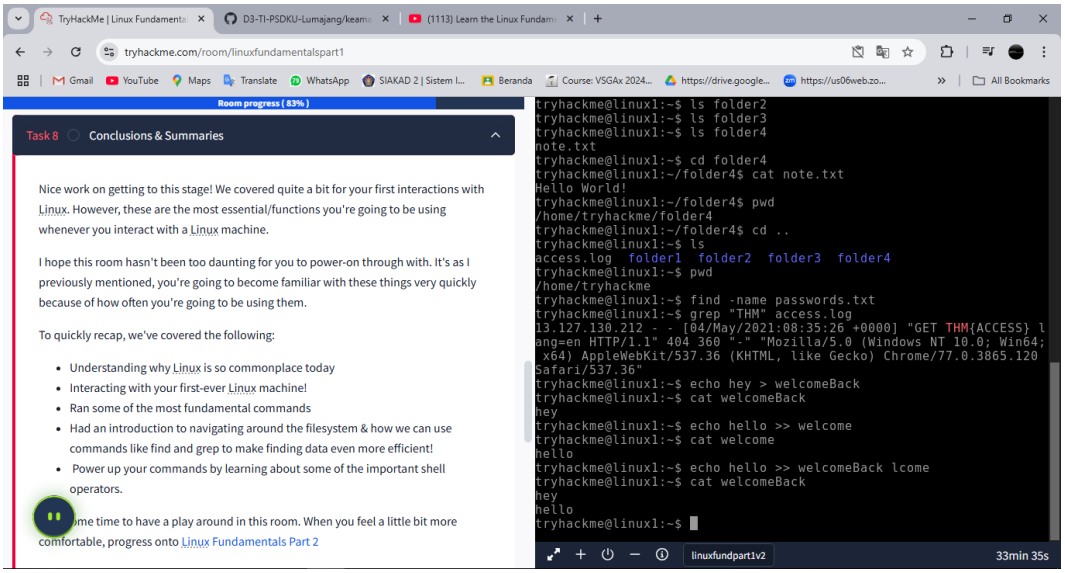
Woop woop! Your answer is correct ×

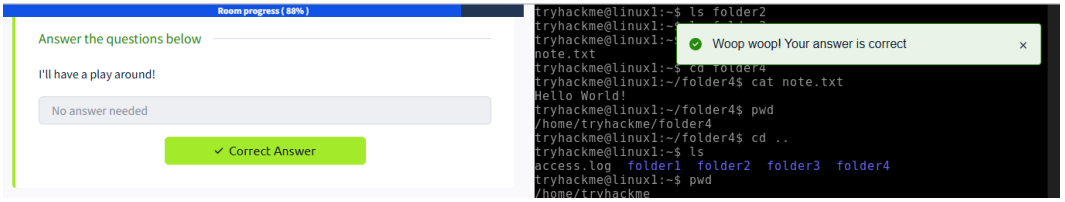
linuxfundpart1v2 35min 13s

```
hello
tryhackme@linux1:~$ echo hello >> welcomeBack lcome
tryhackme@linux1:~$ cat welcomeBack
hey
hello
tryhackme@linux1:~$
```

linuxfundpart1v2 35min 4s

8. Task 8





9. Task 9