

KEAMANAN SISTEM DAN JARINGAN KOMPUTER

(KUIS 1)



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PROGRAM STUDI TEKNOLOGI INFORMASI

POLITEKNIK NEGERI MALANG

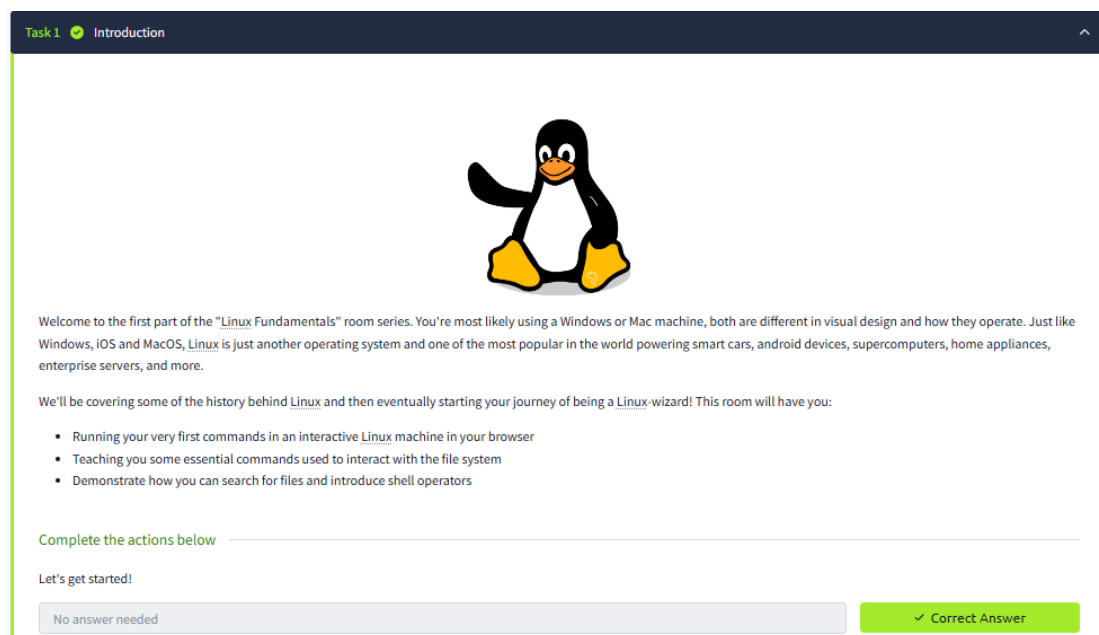
PSDKU LUMAJANG

2025

1. Lakukan Sign Up/Log in terlebih dahulu pada Linux Fundamentals. Kemudian Pilih Linux Fundamentals Part 1. Pada bagian atas sebelum pengerjaan task terdapat video pembelajaran yang menjelaskan dasar-dasar Linux. Tonton video tersebut agar lebih mudah memahami.



2. Task 1: Introduction, menjelaskan pengenalan dasar tentang Linux sebagai salah satu sistem operasi populer di dunia, yang digunakan pada berbagai perangkat seperti mobil pintar, android, superkomputer, dan server perusahaan. Klik "Completed" untuk beralih ke task 2.



3. Task 2: A Bit of Background on Linux, menjelaskan tentang penggunaan Linux dalam kehidupan sehari-hari, seperti website yang sering dikunjungi, panel kontrol pada mobil, sistem kasir, pengontrol lampu lalu lintas. Linux bersifat open source dan memiliki banyak varian yang disesuaikan dengan kebutuhan pengguna. Dalam seri ini menggunakan **Ubuntu** sebagai sistem utama. Untuk pertanyaan dibawah saya menjawab "1991". Kemudian klik submit untuk beralih ke task 3.

Room progress (5%)

Flavours of Linux

The name "Linux" is actually an umbrella term for multiple OS's that are based on UNIX (another operating system). Thanks to Linux being open-source, variants of Linux come in all shapes and sizes - suited best for what the system is being used for.

For example, Ubuntu & Debian are some of the more commonplace distributions of Linux because it is so extensible. I.e. you can run Ubuntu as a server (such as websites & web applications) or as a fully-fledged desktop. For this series, we're going to be using Ubuntu.

Note: Ubuntu Server can run on systems with only 512MB of RAM!

Similar to how you have different versions Windows (7, 8 and 10), there are many different versions/distributions of Linux.

Complete the actions below

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

4. Task 3: Interacting With Your First Linux Machine (In-Browser), menjelaskan cara menggunakan mesin Ubuntu Linux langsung di browser. Untuk memulai, klik tombol "Start Machine" lalu mesin akan berjalan dan menampilkan alamat IP serta waktu aktifnya. Setelah selesai, jangan lupa klik "Terminate" agar mesin berhenti.

Task 3 Interacting With Your First Linux Machine (In-Browser)

This room has a Ubuntu Linux machine that you can interact with all within your browser whilst following along with this room's material.

However, to get started, simply press the green **Start Machine** button below.

Start Machine

Once deployed, a card will appear at the top of the room:

Active Machine Information			
Title	IP Address	Expires	
linuxfundpt1	10.10.144.238	1h 58m 49s	? Add 1 hour Terminate

This contains all of the information for the machine deployed in the room including the IP address and expiry timer - along with buttons to manage the machine. Remember to "**Terminate**" a machine once you are done with the room. More information on this can be found in the [tutorial](#) room.

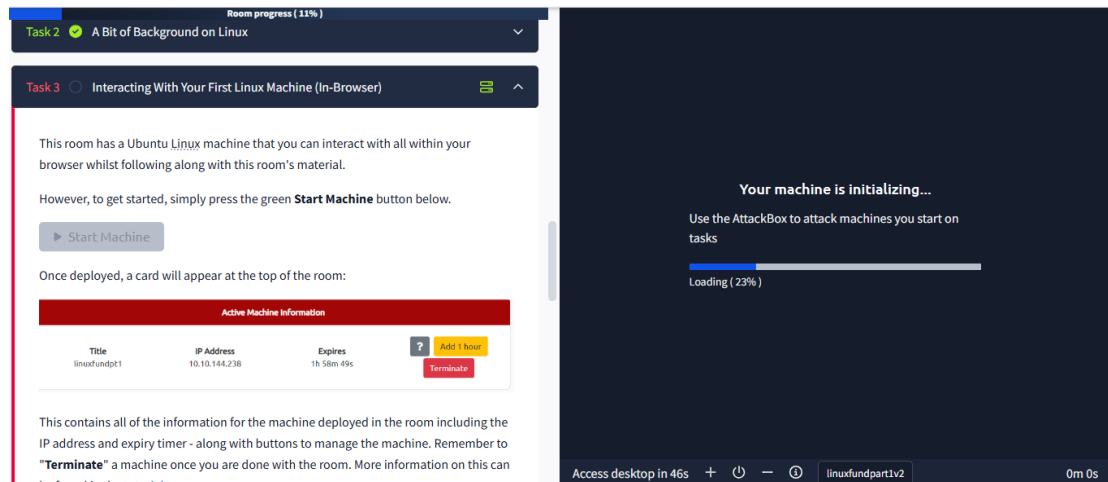
For now, press "**Start Machine**" where you will be able to interact with your own Linux machine within your browser whilst following along with this room:

Task 1 Interacting With Your First Linux Machine (In-Browser)

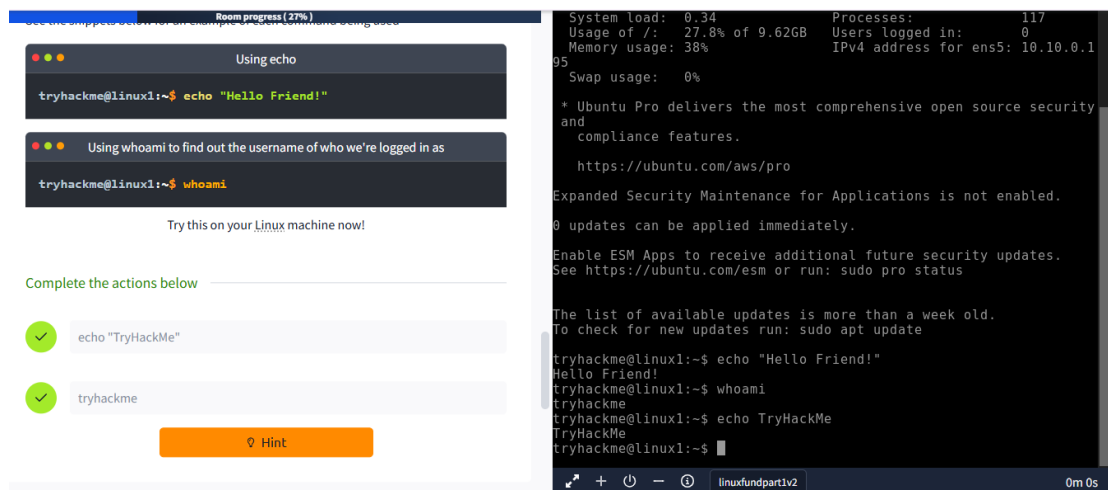
This room has a Ubuntu Linux machine that you can interact with all within your browser whilst

Welcome to Ubuntu 20.04.2 LTS (GNU/Linux 5.4.0-1039-aws x86_64)

Documentation: <https://help.ubuntu.com>
Management: <https://landscape.canonical.com>



5. Task 4: Running Your First few Commands, menjelaskan tentang penggunaan terminal di Linux untuk menjalankan perintah dasar seperti navigasi file, menampilkan isi file, dan membuat file. Task ini memperkenalkan perintah **"echo"** yang digunakan untuk menampilkan teks di terminal dan perintah **"whoami"** untuk menunjukkan pengguna yang saat ini login di sistem.



6. Task 5: Interacting With the Filesystem!, menjelaskan cara berinteraksi dengan filesystem di Linux tanpa menggunakan antarmuka grafis.

Berikut perintah dasar untuk menavigasi sistem:

- **ls** (listing) → menampilkan daftar file dan folder dalam direktori
- **cd** (change directory) → berpindah ke direktori lain
- **cat** (concatenate) → menampilkan isi file
- **pwd** (print working directory) → menunjukkan lokasi direktori saat ini

Room progress (50%)

Complete the actions 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

7. Task 6: Searching for Files, menjelaskan cara mencari file di Linux dengan lebih efisien menggunakan perintah “**find**” dan “**grep**”.

- **find** → digunakan untuk mencari file di seluruh sistem tanpa perlu berpindah direktori secara manual dengan cd dan ls
- **grep** → digunakan untuk mencari teks tertentu di dalam file, seperti log akses pada server web

Room progress (55%)

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.

Complete the actions 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!

No answer needed

Complete

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`

tryhackme@linux1:~\$ find -name *.txt

./folder4/note.txt

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

wc: invalid option -- 'l'

Try 'wc --help' for more information.

tryhackme@linux1:~\$ grep "THM*" access.log

13.127.130.212 - - [04/May/2021:08:35:26 +0000] "GET THM{ACCESS} l

ange=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:~\$

8. Task 7: An Introduction to Shell Operators, menjelaskan operator shell di Linux yang digunakan untuk meningkatkan efisiensi dalam menjalankan perintah.

Berikut operator yang diperkenalkan:

- **&** → menjalankan perintah di latar belakang
- **&&** → menggabungkan beberapa perintah dalam satu baris
- **>** → mengalihkan output perintah ke file (menimpa isi file)
- **>>** → mengalihkan output ke file tanpa menimpa isi sebelumnya (menambahkan data)

Room progress (61%)

me 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
```

Complete the actions below

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

Submit

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`

```
tryhackme@linux1:~$ find -name *.txt
./folder4/note.txt
tryhackme@linux1:~$ wc -l access.log
wc: invalid option -- 'l'
Try 'wc --help' for more information.
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 > welcome
tryhackme@linux1:~$ cat welcome
hey
tryhackme@linux1:~$ echo hello >> welcome
tryhackme@linux1:~$ cat welcome
hey
hello
tryhackme@linux1:~$
```

Complete the actions 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?

✓ Correct Answer

Hint

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

✓ Correct Answer

Hint

Now use the deployed Linux machine to put these into practice

✓ Correct Answer

9. Task 8: Conclusions & Summaries, ringkasan materi dasar Linux yang telah dipelajari, termasuk alasan Linux banyak digunakan, cara berinteraksi dengan mesin Linux, menjalankan perintah dasar, menavigasi sistem file dengan “find” dan “grep”, serta mengenal operator shell.

Task 8 ✓ Conclusions & Summaries

Nice work on getting to this stage! We covered quite a bit for your first interactions with [Linux](#). However, these are the most essential/functions you're going to be using whenever you interact with a [Linux](#) machine.

I hope this room hasn't been too daunting for you to power-on through with. It's as I previously mentioned, you're going to become familiar with these things very quickly because of how often you're going to be using them.

To quickly recap, we've covered the following:

- Understanding why [Linux](#) is so commonplace today
- Interacting with your first-ever [Linux](#) machine!
- Ran some of the most fundamental commands
- Had an introduction to navigating around the filesystem & how we can use commands like `find` and `grep` to make finding data even more efficient!
- Power up your commands by learning about some of the important shell operators.

Take some time to have a play around in this room. When you feel a little bit more comfortable, progress onto [Linux Fundamentals Part 2](#)

Complete the actions below

I'll have a play around!

✓ Correct Answer

10. Task 9: Linux Fundamentals Part 2, menginstruksikan untuk mematikan mesin Linux yang telah dijalankan di Task 3. Setelah itu, pengguna bisa melanjutkan ke Linux Fundamentals Part 2 melalui link yang diberikan.

Task 9  Linux Fundamentals Part 2 

Visit part two of the [Linux](https://tryhackme.com/room/linuxfundamentalspart2) fundamentals series here! <https://tryhackme.com/room/linuxfundamentalspart2>

Complete the actions below

Terminate the machine deployed in this room from task 3.

No answer needed

✓ Correct Answer

Join Linux Fundamentals Part 2!

No answer needed

✓ Correct Answer