



IUS
INSTITUT
UNIVERSITAIRE
DES SCIENCES

Faculté : Sciences Informatique

Nom & Prénom : Louis Dochlie

TD N°1 – ADMINISTRATION DES SYSTÈMES INFORMATIQUES I

Niveau : L3

Date : Le/27/02/26

Installation et première configuration d'un serveur Ubuntu

L'objectif de ce TD est de :

1. Installer un serveur Linux minimal
2. Configurer le réseau
3. Mettre en place l'accès distant sécurisé avec SSH
4. Effectuer la configuration de base d'un serveur


Étapes du TD :

1. Création de la machine virtuelle

General

Identity Features Description Disk Encryption

VM Name


OS 

OS Distribution

OS Version

System

Motherboard Processor Acceleration

Base Memory 4096 MB 

Boot Device Order (BIOS only)

- ☒ Floppy
- ☒ Optical
- ☒ Hard Disk
- ☐ Network

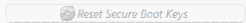
Chipset

TPM Version

Pointing Device

Features

- ☒ I/O APIC
- ☒ Hardware Clock in UTC
- ☐ UEFI
- ☐ Secure Boot




Display

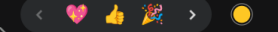
Screen Remote Display Recording

Video Memory 0 MB

Number of Virtual Monitors

meet.google.com

 Ismael SAINT AMOUR (...)



Display

ScreenRemote DisplayRecording

Video Memory

0 MB

128 MB

16 MB

Number of Virtual Monitors

1

8

1

Scale Factor

All Monitors

100%

225%

100%

Graphics Controller

VMSVGA

Features

☐ 3D Acceleration

Storage

Devices

Controller: IDE

ubuntu-24.04.4-live-server-amd64.iso

Controller: SATA

doche-TP.vdi

Attributes

Optical Drive

IDE Primary Device 0

☐ Live CD/DVD

Information

Type

Image

Size

3.17 GB

Location

C:\Users\doch\Downloads\ubuntu-24.04.4-live-server-amd64.iso

Attached to

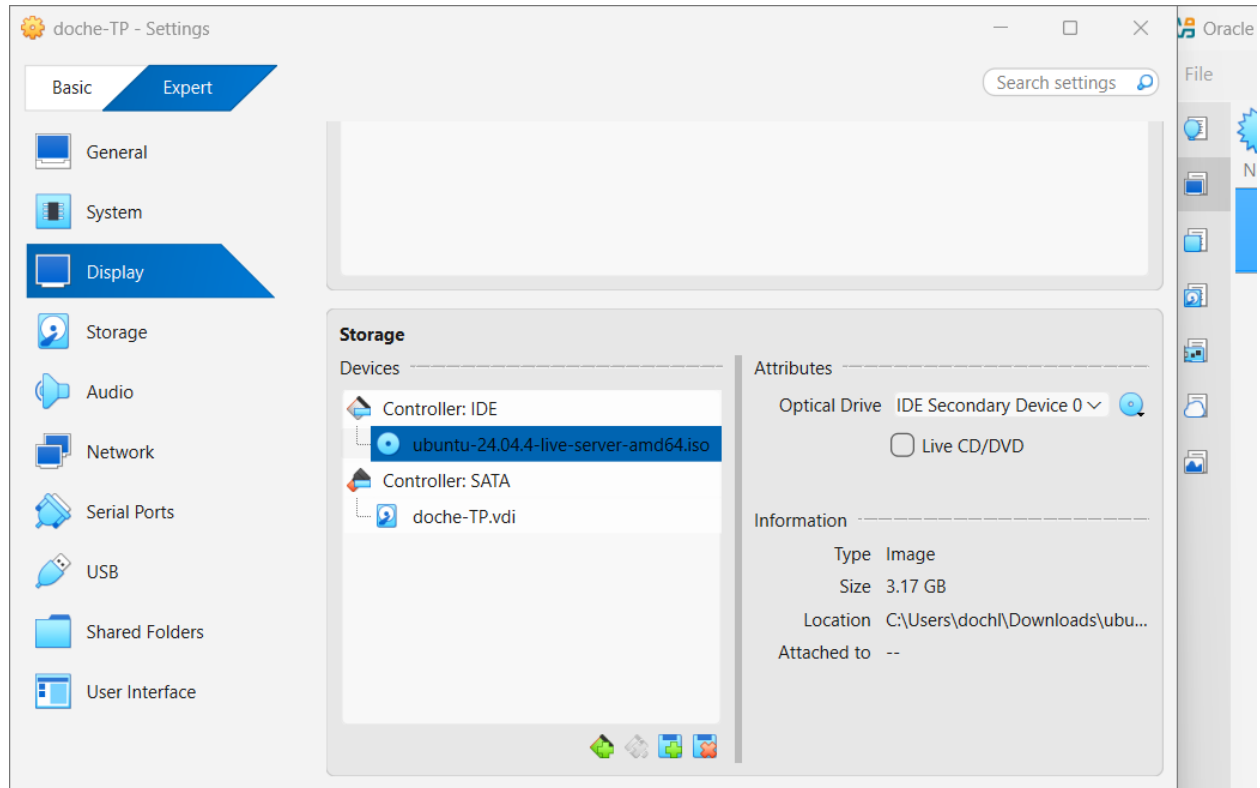
--

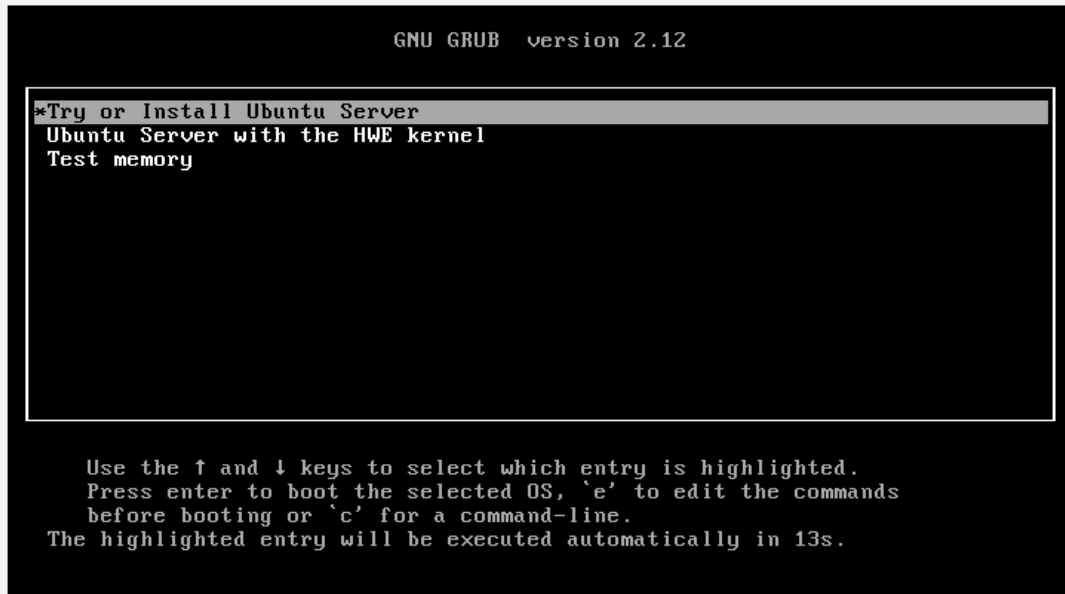
Audio

☒ Enable Audio

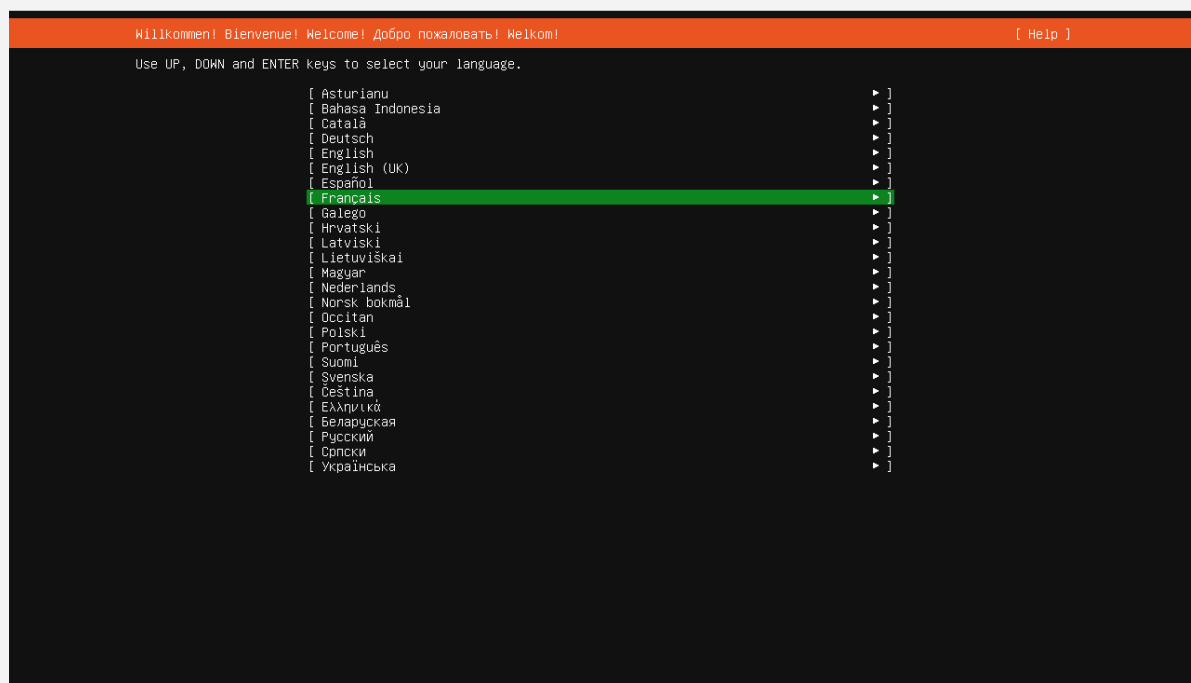
OKCancelHelp

2.Montage de l'image ISO





3. Installation d'Ubuntu Server



Configuration clavier		[Help]
Veuillez sélectionner votre disposition de disposition automatiquement.		ifler le clavier" afin de détecter votre
Disposition :	A user-defined custom Layout Afghani Albanian Amharic Arabic Arabic (Morocco) Arabic (Syria) Armenian Azerbaijani Bambara Bangla Belarusian Belgian Berber (Algeria, Latin) Bosnian Braille Bulgarian Burmese Chinese Croatian Czech Danish Dhivehi Dutch Dzongkha English (Australian) English (Cameroon) English (Ghana) English (Nigeria) English (South Africa) English (UK) English (US) Esperanto Estonian Faroese Filipino Finnish French French (Canada) French (Democratic Republic of the Congo) French (Togo) Georgian German German (Austria) Greek Hebrew Hungarian Icelandic	

Configuration clavier

[Help]

Veillez sélectionner votre disposition de clavier ci-dessous, ou sélectionner "Identifier le clavier" afin de détecter votre disposition automatiquement.

Disposition : [English (US) ▼]

Variante : [English (US) ▼]

[Identifier le clavier]

[Terminé]
[Retour]

Choose the type of installation

[Help]

Choose the base for the installation.

☒ Ubuntu Server

The default install contains a curated set of packages that provide a comfortable experience for operating your server.

☐ Ubuntu Server (minimized)

This version has been customized to have a small runtime footprint in environments where humans are not expected to log in.

Additional options

☐ Search for third-party drivers

This software is subject to license terms included with its documentation. Some is proprietary. Third-party drivers should not be installed on systems that will be used for FIPS or the real-time kernel.

Choose the type of installation

[Help]

Choose the base for the installation.

☒ Ubuntu Server

The default install contains a curated set of packages that provide a comfortable experience for operating your server.

☐ Ubuntu Server (minimized)

This version has been customized to have a small runtime footprint in environments where humans are not expected to log in.

Additional options

☐ Search for third-party drivers

This software is subject to license terms included with its documentation. Some is proprietary. Third-party drivers should not be installed on systems that will be used for FIPS or the real-time kernel.

[Terminé]

[Retour]

Network configuration

[Help]

Configurez au moins une interface pour que ce serveur puisse communiquer avec les autres machines sur le réseau, préférablement un réseau avec accès aux mises à jour.

NAME	TYPE	NOTES
[enp0s3 eth - ▶]		
DHCPv4	10.0.2.15/24	
08:00:27:62:e3:4a / Intel Corporation / 82540EM Gigabit Ethernet Controller (PRO/1000 MT Desktop Adapter)		
[enp0s8 eth - ▶]		
désactivé	autoconfiguration failed	
08:00:27:65:86:6a / Intel Corporation / 82540EM Gigabit Ethernet Controller (PRO/1000 MT Desktop Adapter)		
[Create bond ▶]		

Si ce système nécessite un proxy pour se connecter à Internet, entrez ses détails ici.

Adresse du proxy :

If you need to use a HTTP proxy to access the outside world, enter the proxy information here. Otherwise, leave this blank.

The proxy information should be given in the standard form of "http://[[user][:pass]@]host[:port]/".

[Terminé]
[Retour]

meeloo

If you use an alternative mirror for Ubuntu, enter its details here.

Adresse du miroir :

You may provide an archive mirror to be used instead of the default.

This mirror location passed tests.

```
Atteint :1 http://archive.ubuntu.com/ubuntu noble InRelease
Réception de :2 http://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Réception de :3 http://archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
252 ko réceptionnés en 3s (85,9 ko/s)
Lecture des listes de paquets...
```

[Terminé]
[Retour]

Configuration de stockage guidée

[Help]

Configure a guided storage layout, or create a custom one:

(X) Utiliser un disque entier

[VBOX_HARDDISK_VB93f8c132-9314386e local disk 25.000G ▼]

[] Set up this disk as an LVM group

[] Encrypt the LVM group with LUKS

Phrase de passe :

Confirmez la phrase de passe :

[] Also create a recovery key

The key will be stored as ~/recovery-key.txt in the live system and will be copied to /var/log/installer/ in the target system.

() Custom storage layout

Terminé

Retour

Configuration du stockage

[Help]

SOMMAIRE DU SYSTÈME DE FICHIERS

POINT DE MONTAGE	TAILLE	TYPE	TYPE DE PÉRIPHÉRIQUE
[/	24.997G	new ext4	nouveau partition de disque local ▶]

DISQUES DISPONIBLES

Aucun périphérique disponible

[Create software RAID (md) ▶]

[Create volume group (LVM) ▶]

PÉRIPHÉRIQUES UTILISÉS

PÉRIPHÉRIQUE	TYPE	TAILLE
[VBOX_HARDDISK_VB93f8c132-9314386e	disque local	25.000G ▶]
partition 1 nouveau, BIOS grub spacer		1.000M ▶
partition 2 nouveau, to be formatted as ext4, mounted at /		24.997G ▶

Configuration du stockage[Help]

SOMMAIRE DU SYSTÈME DE FICHIERS

POINT DE MONTAGE	TAILLE	TYPE	TYPE DE PÉRIPHÉRIQUE
[/	24.997G	new ext4	nouveau partition de disque local ▶]

DISQUES DISPONIBLES

Aucun périphérique disponible

[Create software RAID (md) ▶]
[Create volume group (LVM) ▶]

PÉRIPHÉRIQUES UTILISÉS

PÉRIPHÉRIQUE
[VBOX_HARDDISK_VB93f8c
partition 1 nouveau,
partition 2 nouveau,

Confirmer l'action

Selecting Continue below will begin the installation process and result in the loss of data on the disks selected to be formatted.

You will not be able to return to this or a previous screen once the installation has started.

Are you sure you want to continue?

[Non]
[Continuer]

Profile configuration[Help]

Enter the username and password you will use to log in to the system. You can configure SSH access on a later screen, but a password is still needed for sudo.

Votre nom :

Louis Dochlie

Your servers name:

ubuntuserve

The name it uses when it talks to other computers.

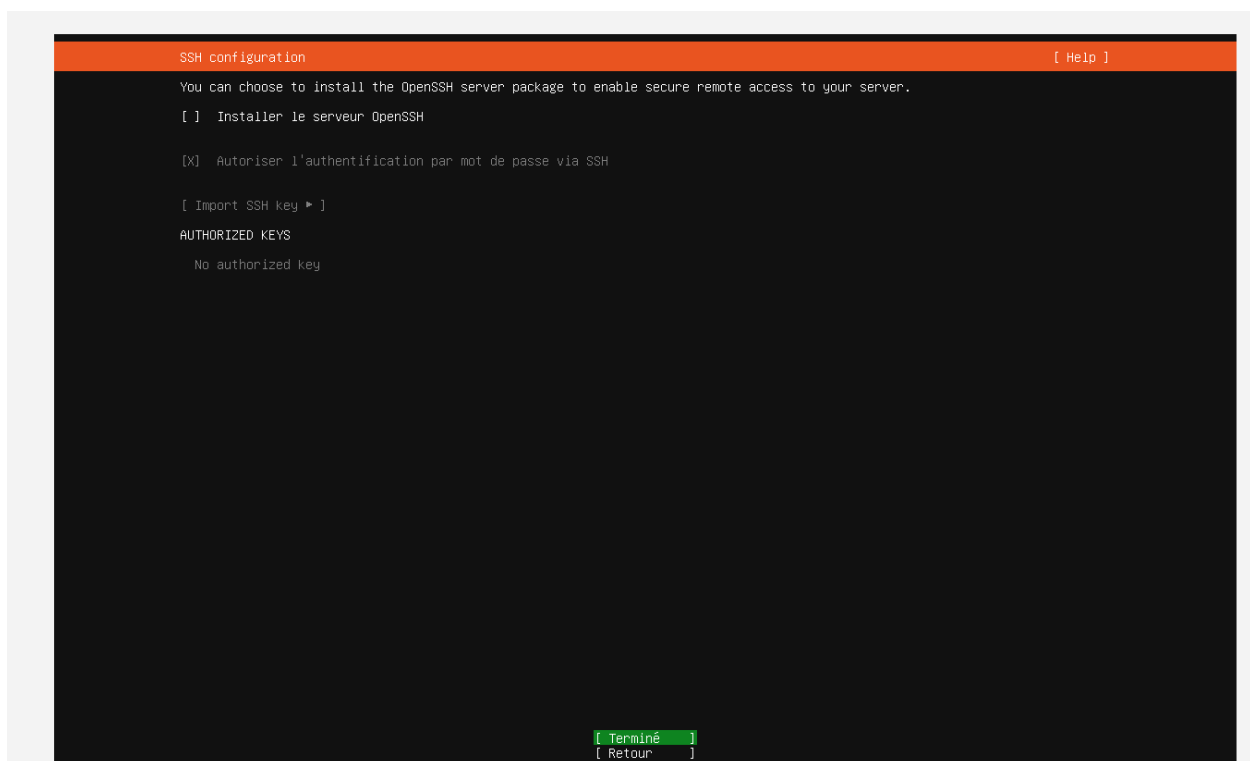
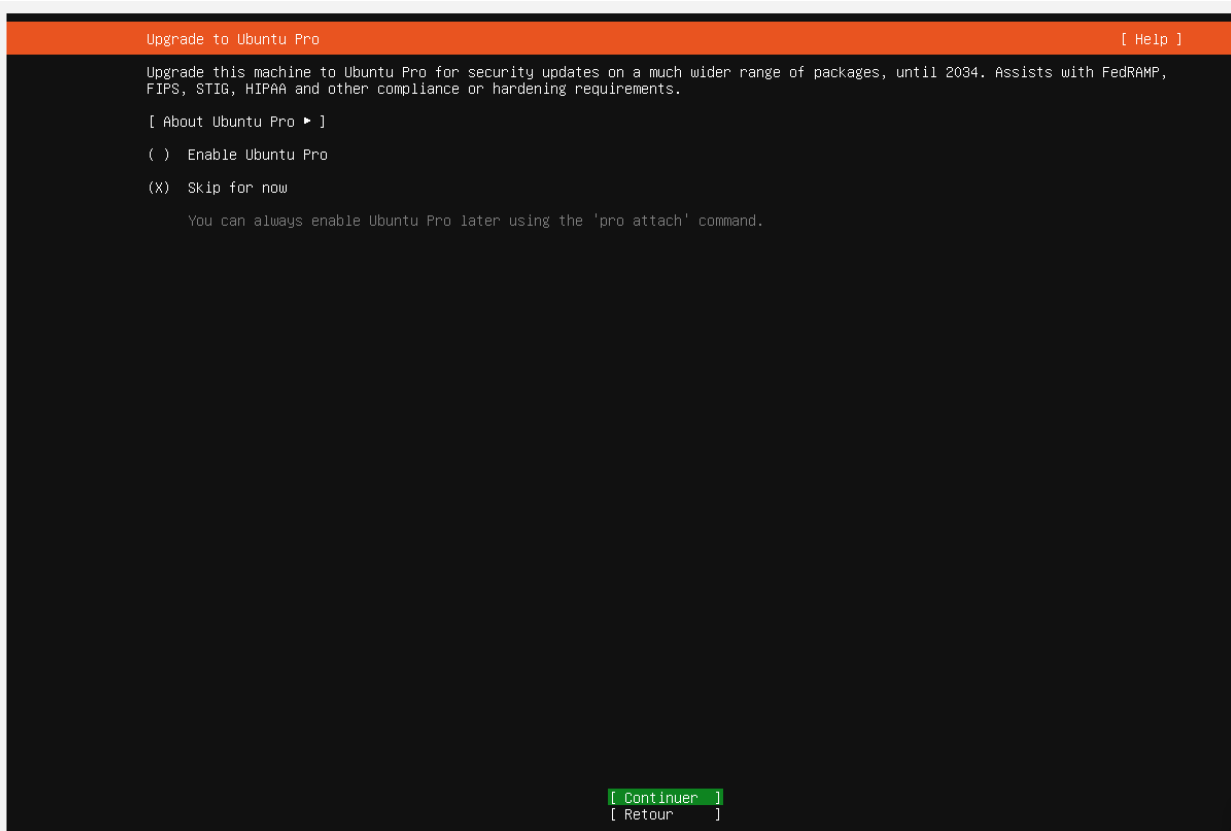
Choisir un nom d'utilisateur :

doche

Choisir un mot de passe :

Confirmer votre mot de passe:

[Terminé]



Featured server snaps

[Help]

These are popular snaps in server environments. Select or deselect with SPACE, press ENTER to see more details of the package, publisher and versions available.

[]	microk8s	canonical✓	Kubernetes for workstations and appliances	►
[]	nextcloud	nextcloud✓	Nextcloud Server - A safe home for all your data	►
[]	wekan	xet7	Open-Source kanban	►
[]	canonical-livepatch	canonical✓	Canonical Livepatch Client	►
[]	rocketchat-server	rocketchat✓	Rocket.Chat server	►
[]	mosquitto	mosquitto✓	Eclipse Mosquitto MQTT broker	►
[]	etcd	canonical✓	Resilient key-value store by CoreOS	►
[]	powershell	canonical✓	PowerShell for every system!	►
[]	sbfnzbd	safihre	SBfnzbd - The automated Usenet download tool	►
[]	wormhole	snapcrafters	get things from one computer to another, safely	►
[]	aws-cli	aws✓	Universal Command Line Interface for Amazon Web Services	►
[]	google-cloud-sdk	google-cloud-sdk✓	Google Cloud SDK	►
[]	slcli	softlayer	Python based SoftLayer API Tool.	►
[]	doctl	digitalocean✓	The official DigitalOcean command line interface	►
[]	keepalived	keepalived-project✓	High availability VRRP/BFD and load-balancing for Linux	►
[]	prometheus	canonical✓	The Prometheus monitoring system and time series database	►
[]	lxd	canonical✓	LXD - container and VM manager	►

[Terminé]
[Retour]

Installation complete!

[Help]

```
configuring partition: partition-1
configuring format: format-0
configuring mount: mount-0
executing curtin install extract step
curtin command install
  writing install sources to disk
  running 'curtin extract'
  curtin command extract
    acquiring and extracting image from cp:///tmp/tmpelxjxct1/mount
configuring keyboard
curtin command in-target
executing curtin install curthooks step
curtin command install
  configuring installed system
  running 'curtin curthooks'
  curtin command curthooks
    configuring apt configuring apt
    installing missing packages
    installing packages on target system: ['grub-pc']
    configuring iscsi service
    configuring raid (mdadm) service
    configuring NVMe over TCP
    installing kernel
    setting up swap
    apply networking config
    writing etc/fstab
    configuring multipath
    updating packages on target system
    configuring pollinate user-agent on target
    updating initramfs configuration
    configuring target system bootloader
    installing grub to target devices
    copying metadata from /cdrom
final system configuration
calculating extra packages to install
configuring cloud-init
downloading and installing security updates
curtin command in-target
restoring apt configuration
curtin command in-target
subiquity/Late/run:
```

[View full log]

[Redémarrer maintenant]

La Connexion SSH depuis la machine hôte

```
doche@ubuntuserve: ~  
The authenticity of host '192.168.0.125 (192.168.0.125)' can't be established.  
ED25519 key fingerprint is SHA256:z/uWq2SXA0+WciaPpmh3ZvTTr0b0CIke1a8P37gF+io.  
This key is not known by any other names.  
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes  
Warning: Permanently added '192.168.0.125' (ED25519) to the list of known hosts.  
doche@192.168.0.125's password:  
Welcome to Ubuntu 24.04.4 LTS (GNU/Linux 6.8.0-101-generic x86_64)  
  
* Documentation:  https://help.ubuntu.com  
* Management:    https://landscape.canonical.com  
* Support:       https://ubuntu.com/pro  
  
System information as of jeu. 26 févr. 2026 20:43:32 UTC  
  
System load:  0.09          Processes:            101  
Usage of /:   26.8% of 24.44GB Users logged in:      1  
Memory usage: 6%          IPv4 address for enp0s3: 192.168.0.125  
Swap usage:   0%  
  
La maintenance de sécurité étendue pour Applications n'est pas activée.  
  
2 mises à jour peuvent être appliquées immédiatement.  
Pour afficher ces mises à jour supplémentaires, exécuter : apt list --upgradable  
  
Activez ESM Apps pour recevoir des futures mises à jour de sécurité supplémentaires.  
Visitez https://ubuntu.com/esm ou exécutez : sudo pro status  
  
doche@ubuntuserve:~$ ~
```

La configuration de base du serveur

```
doche@ubuntuserve:~$ sudo apt update && sudo apt upgrade -y
Atteint :1 http://archive.ubuntu.com/ubuntu noble InRelease
Atteint :2 http://archive.ubuntu.com/ubuntu noble-updates InRelease
Atteint :3 http://archive.ubuntu.com/ubuntu noble-backports InRelease
Atteint :4 http://security.ubuntu.com/ubuntu noble-security InRelease
Lecture des listes de paquets... Fait
Construction de l'arbre des dépendances... Fait
Lecture des informations d'état... Fait
4 paquets peuvent être mis à jour. Exécutez « apt list --upgradable » pour les voir.
Lecture des listes de paquets... Fait
Construction de l'arbre des dépendances... Fait
Lecture des informations d'état... Fait
Calcul de la mise à jour... Fait
The following upgrades have been deferred due to phasing:
  python3-software-properties software-properties-common
Les paquets suivants seront mis à jour :
  cloud-init systemd-hwe-hwdb
2 mis à jour, 0 nouvellement installés, 0 à enlever et 2 non mis à jour.
Il est nécessaire de prendre 631 ko dans les archives.
Après cette opération, 20,5 ko d'espace disque supplémentaires seront utilisés.
Réception de :1 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 systemd-hwe-hwdb all 255.1.7
Réception de :2 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 cloud-init all 25.3-0ubuntu1~
631 ko réceptionnés en 11s (58,4 ko/s)
Préconfiguration des paquets...
(Lecture de la base de données... 87540 fichiers et répertoires déjà installés.)
Préparation du dépaquetage de ../systemd-hwe-hwdb_255.1.7_all.deb ...
Dépaquetage de systemd-hwe-hwdb (255.1.7) sur (255.1.6) ...
Préparation du dépaquetage de ../cloud-init_25.3-0ubuntu1~24.04.1_all.deb ...
Dépaquetage de cloud-init (25.3-0ubuntu1~24.04.1) sur (25.2-0ubuntu1~24.04.1) ...
Paramétrage de cloud-init (25.3-0ubuntu1~24.04.1) ...
Paramétrage de systemd-hwe-hwdb (255.1.7) ...
Traitement des actions différées (« triggers ») pour man-db (2.12.0-4build2) ...
Traitement des actions différées (« triggers ») pour udev (255.4-1ubuntu8.12) ...
Traitement des actions différées (« triggers ») pour rsyslog (8.2312.0-3ubuntu9.1) ...
```

```

Préparation du dépaquetage de ../cloud-init_25.3-0ubuntu1~24.04.1_all.deb ...
Dépaquetage de cloud-init (25.3-0ubuntu1~24.04.1) sur (25.2-0ubuntu1~24.04.1) ...
Paramétrage de cloud-init (25.3-0ubuntu1~24.04.1) ...
Paramétrage de systemd-hwe-hwdb (255.1.7) ...
Traitement des actions différées (« triggers ») pour man-db (2.12.0-4build2) ...
Traitement des actions différées (« triggers ») pour udev (255.4-1ubuntu8.12) ...
Traitement des actions différées (« triggers ») pour rsyslog (8.2312.0-3ubuntu9.1) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
doche@ubuntu:~$ timedatectl set-timezone Amerique/Port-au-prince
Failed to set time zone: Invalid or not installed time zone 'Amerique/Port-au-prince'
doche@ubuntu:~$ timedatectl set-timezone Amerique
Failed to set time zone: Invalid or not installed time zone 'Amerique'
doche@ubuntu:~$ timedatectl set-timezone UTC
==== AUTHENTICATING FOR org.freedesktop.timedate1.set-timezone ====
Authentication is required to set the system timezone.
Authenticating as: Louis Dochlie (doche)
Password:
==== AUTHENTICATION COMPLETE ====
doche@ubuntu:~$ |

```

La Sécurisation de SSH

```

doche@ubuntu:~$ sudo nano /etc/ssh/sshd_config
doche@ubuntu:~$ sudo systemctl restart ssh
doche@ubuntu:~$ |

```

En conclusion Ce TD m'a permis de mettre en pratique les bases essentielles de l'administration d'un serveur Linux. Les différentes étapes réalisées l'installation d'un système minimal, la configuration du réseau, la mise en place d'un accès distant sécurisé via SSH et paramétrage initial du serveur ils constituent les fondations indispensables pour assurer la disponibilité, la sécurité et la fiabilité d'un environnement serveur.