KOMPUTASI UBIQUITOUS DAN PERVASIF
INSTALASI IOTA, DOCKER, DAN PROXMOX

222L1

Disusun Oleh :

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JURUSAN TEKNIK INFORMATIKA

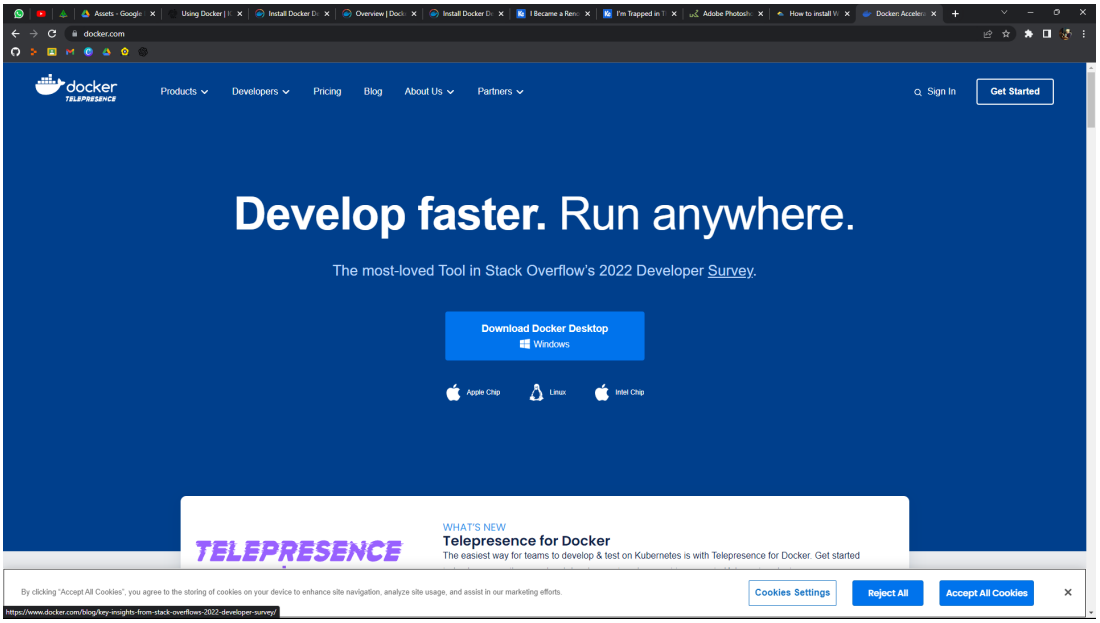
FAKULTAS ILMU KOMPUTER

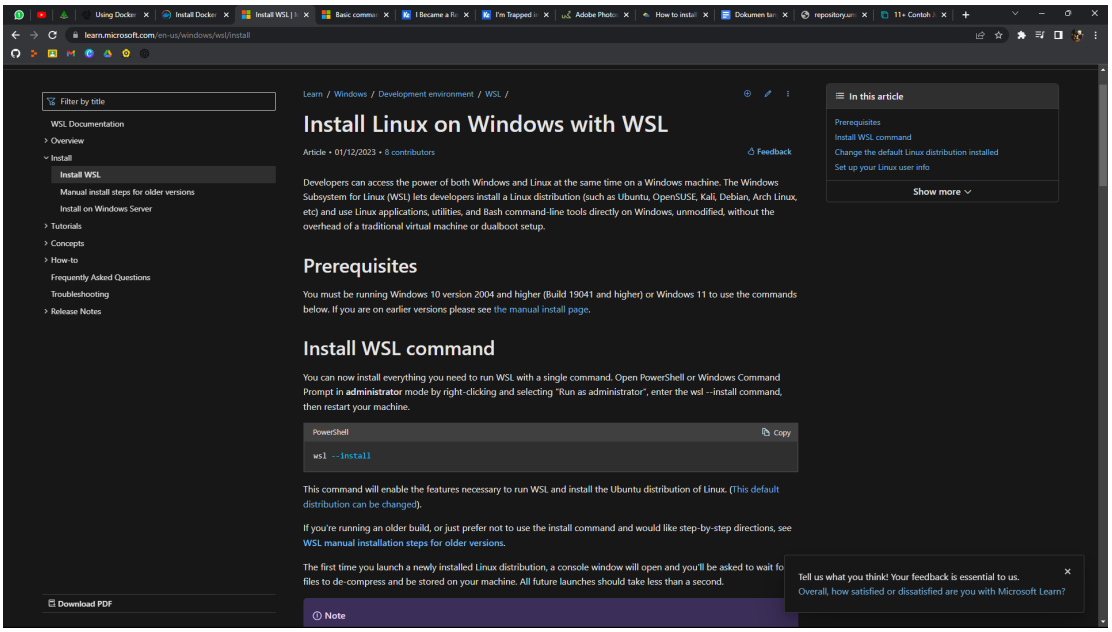
UNIVERSITAS SRIWIJAYA

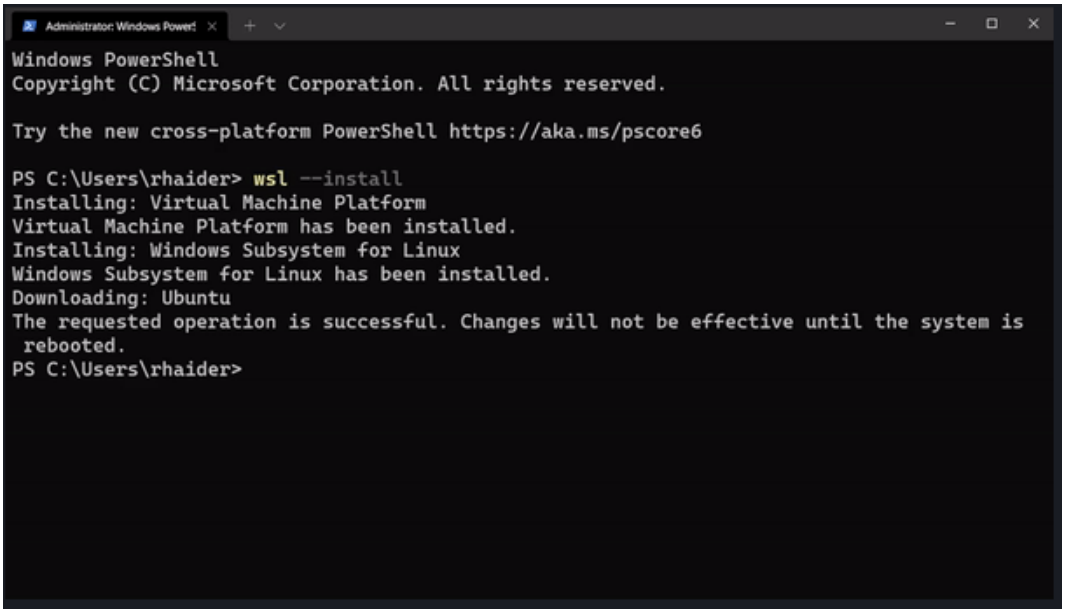
2023

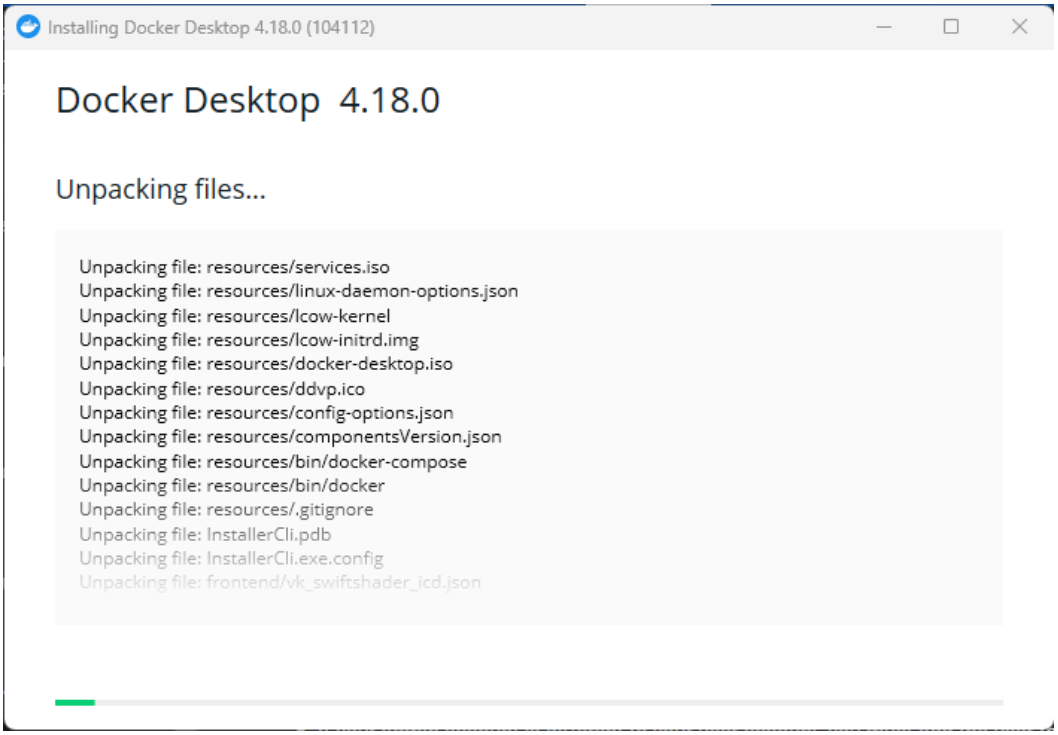
INSTALASI IOTA, DOCKER, DAN PROXMOX

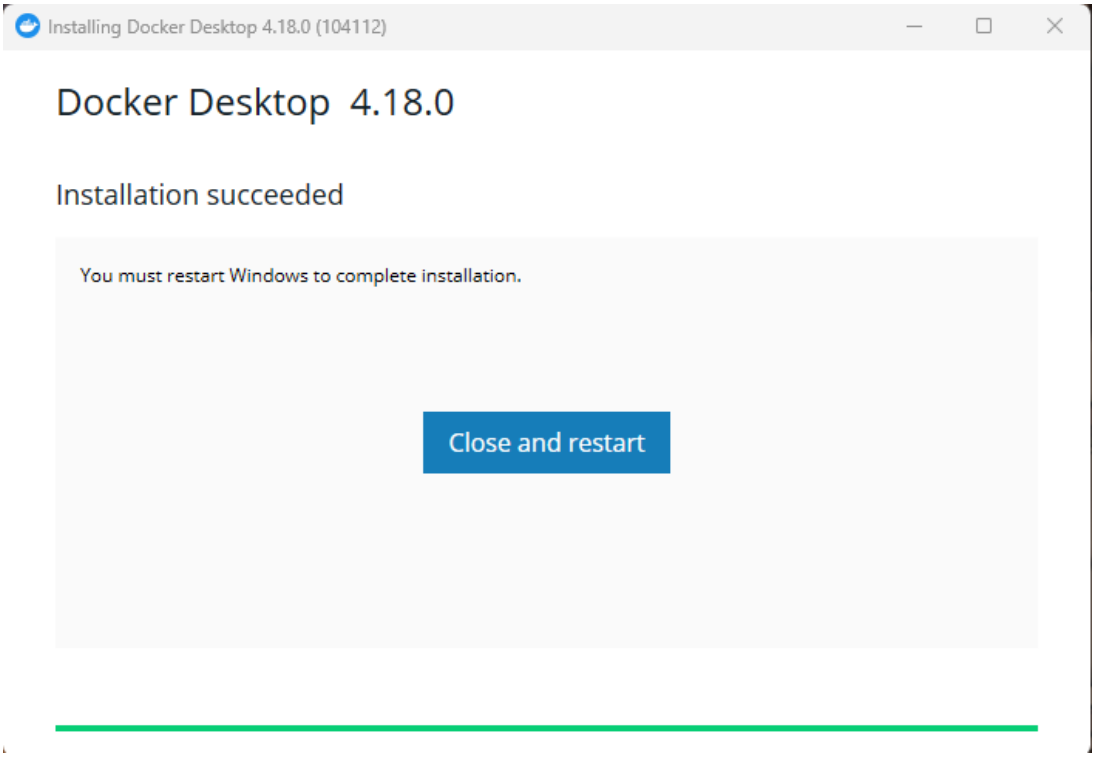
A. Install IOTA





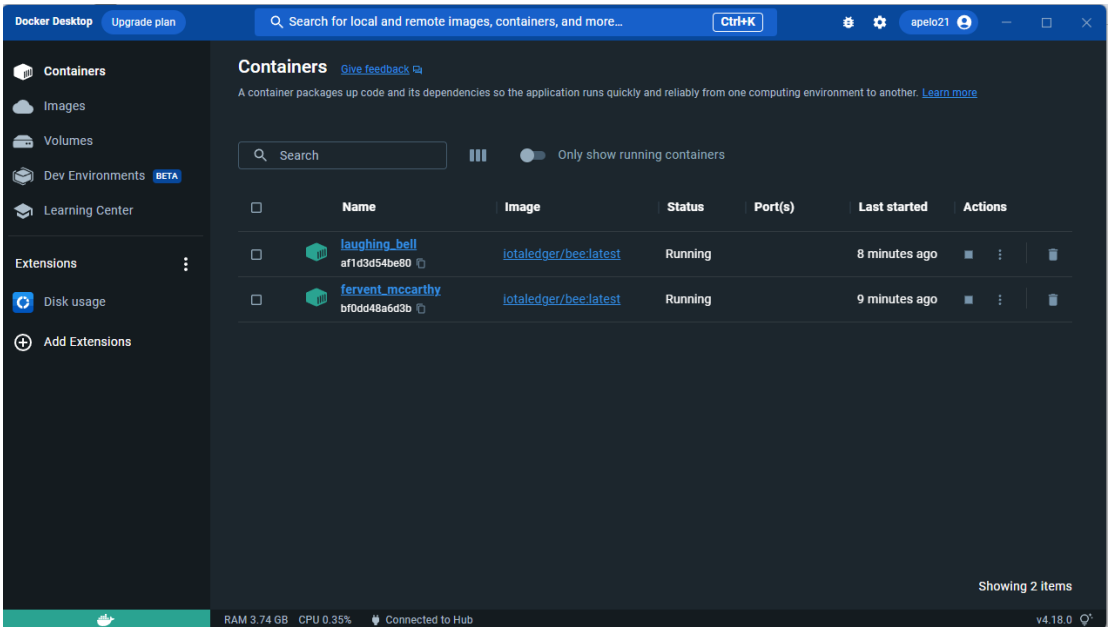

Administrator: Windows Powerl
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.
Try the new cross-platform PowerShell https://aka.ms/pscore6
PS C:\Users\rhaider> wsl --install
Installing: Virtual Machine Platform
Virtual Machine Platform has been installed.
Installing: Windows Subsystem for Linux
Windows Subsystem for Linux has been installed.
Downloading: Ubuntu
The requested operation is successful. Changes will not be effective until the system is rebooted.
PS C:\Users\rhaider>


Installing Docker Desktop 4.18.0 (104112)
Docker Desktop 4.18.0
Unpacking files...
Unpacking file: resources/services.iso
Unpacking file: resources/linux-daemon-options.json
Unpacking file: resources/lcow-kernel
Unpacking file: resources/lcow-initrd.img
Unpacking file: resources/docker-desktop.iso
Unpacking file: resources/ddvp.ico
Unpacking file: resources/config-options.json
Unpacking file: resources/componentsVersion.json
Unpacking file: resources/bin/docker-compose
Unpacking file: resources/bin/docker
Unpacking file: resources/.gitignore
Unpacking file: InstallerCli.pdb
Unpacking file: InstallerCli.exe.config
Unpacking file: frontend/vk_swiftshader_icd.json




```
Cloning into 'bee'...
remote: Enumerating objects: 33340, done.
remote: Counting objects: 100% (285/285), done.
remote: Compressing objects: 100% (205/205), done.
remote: Total 33340 (delta 117), reused 204 (delta 78), pack-reused 33055
Receiving objects: 100% (33340/33340), 15.52 MiB | 1.15 MiB/s, done.
Resolving deltas: 100% (23457/23457), done.
```

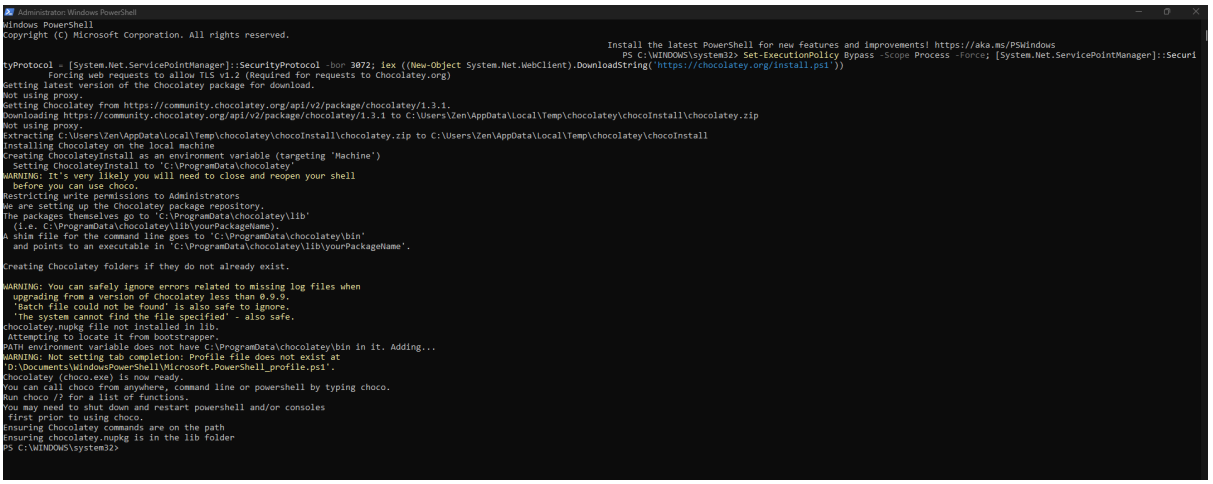
```
latest: Pulling from iotaledger/bee
36698cfa5275: Pull complete
6a8659ec8836: Pull complete
a1f1879bb7de: Pull complete
bb14e507de00: Pull complete
023d1fb2c19b: Pull complete
aa9fe1f7c3a9: Pull complete
183d7be5fbfd: Pull complete
2e4d624d5d2a: Pull complete
4f4fb700ef54: Pull complete
Digest: sha256:b3216b65a2190e766886de679e9e864a98f30be05b5427a77ee986c15f94415f
Status: Downloaded newer image for iotaledger/bee:latest
docker.io/iotaledger/bee:latest
```

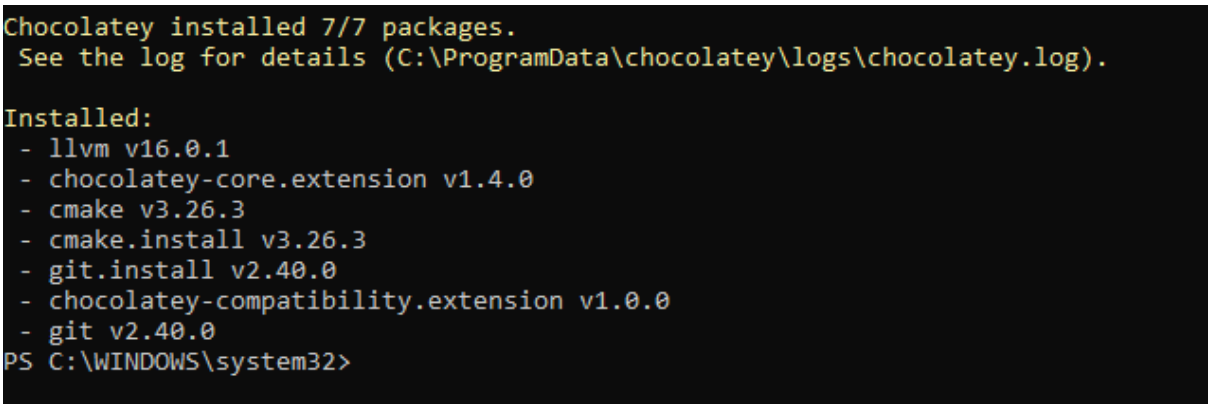


set up a node for IOTA Transaction

Untuk adanya transaksi pada IOTA, maka diperlukannya node IOTA.

Installing from Source :





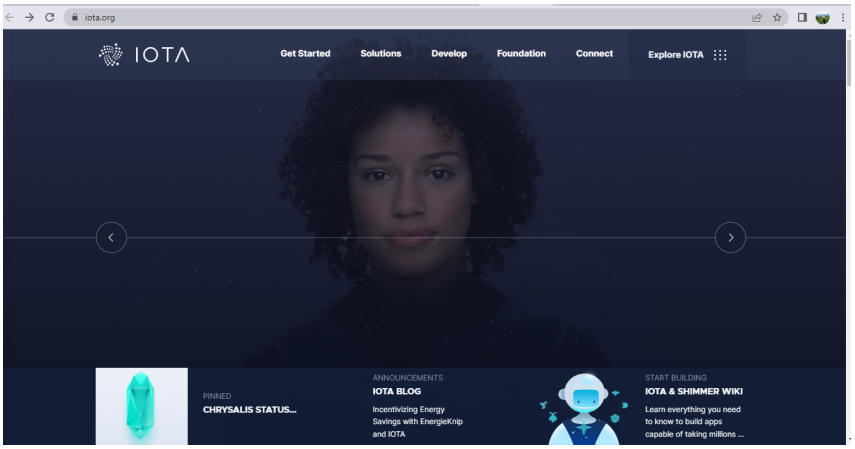
```
PS C:\WINDOWS\system32> rustup update
info: syncing channel updates for 'stable-x86_64-pc-windows-msvc'
info: checking for self-updates

  stable-x86_64-pc-windows-msvc unchanged - rustc 1.68.2 (9eb3afe9e 2023-03-27)

info: cleaning up downloads & tmp directories
```

Compiling the Bee Node :

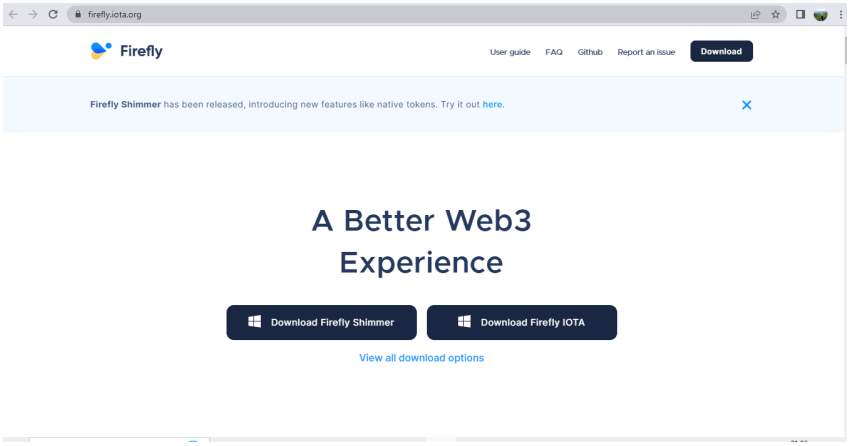
```
PS C:\WINDOWS\system32> git clone https://github.com/iotaledger/bee.git --branch mainnet-develop
Cloning into 'bee'...
remote: Enumerating objects: 33340, done.
remote: Counting objects: 100% (285/285), done.
remote: Compressing objects: 100% (205/205), done.
remote: Total 33340 (delta 117), reused 204 (delta 78), pack-reused 33055
Receiving objects: 100% (33340/33340), 15.52 MiB | 1.21 MiB/s, done.
Resolving deltas: 100% (23457/23457), done.
Updating files: 100% (794/794), done.
```

```
latest: Pulling from iotaledger/bee
36698cfa5275: Pull complete
6a8659ec8836: Pull complete
a1f1879bb7de: Pull complete
bb14e507de00: Pull complete
023d1fb2c19b: Pull complete
aa9fe1f7c3a9: Pull complete
183d7be5fbfd: Pull complete
2e4d624d5d2a: Pull complete
4f4fb700ef54: Pull complete
Digest: sha256:b3216b65a2190e766886de679e9e864a98f30be05b5427a77ee986c15f94415f
Status: Downloaded newer image for iotaledger/bee:latest
docker.io/iotaledger/bee:latest
```

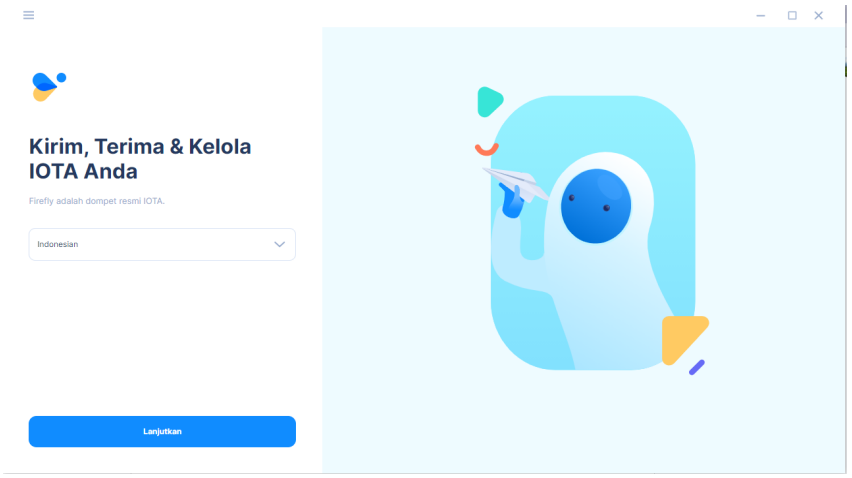
1. Pertama buka web IOTA di browser



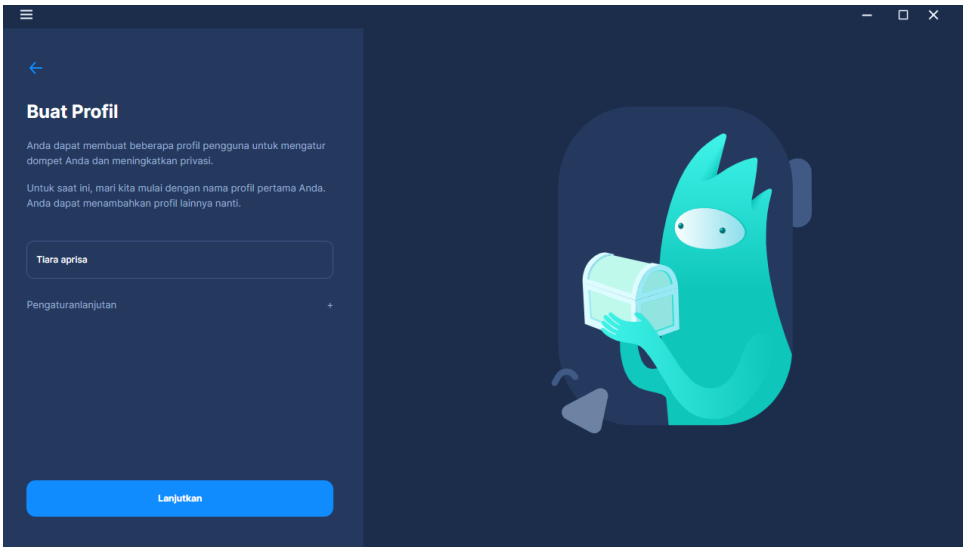
2. Kemudian Download Firefly IOTA

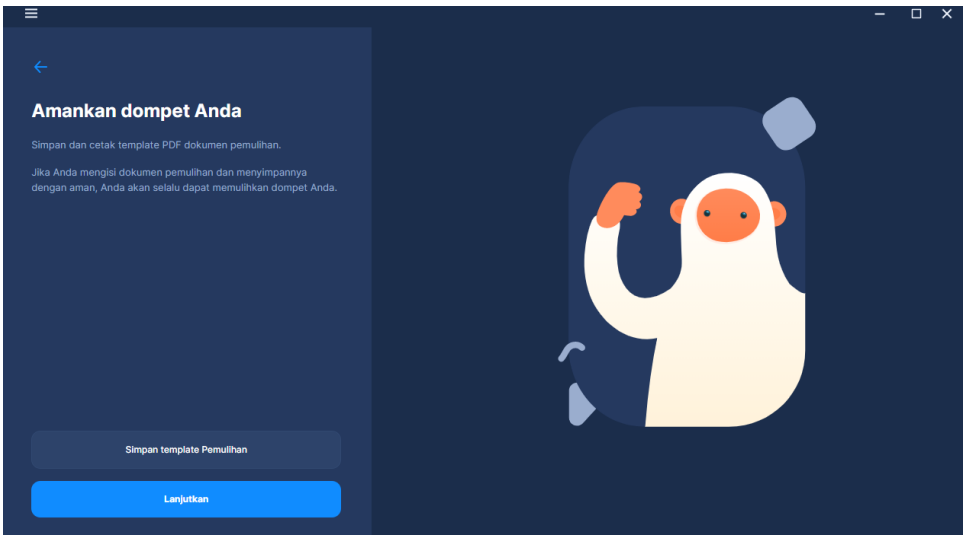


3. Setelah IOTA terinstal ikuti langkah-langkahnya

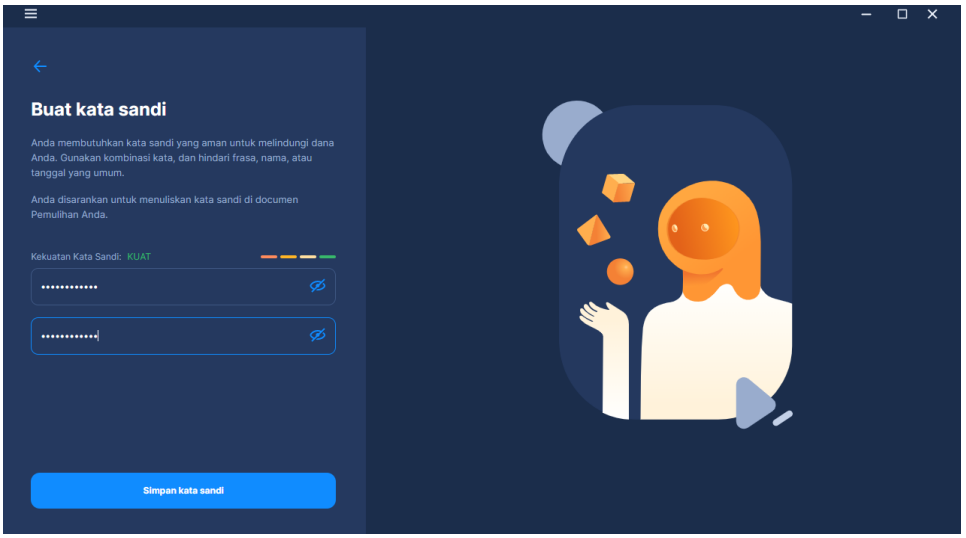


4. Buat akun Profil terlebih dahulu

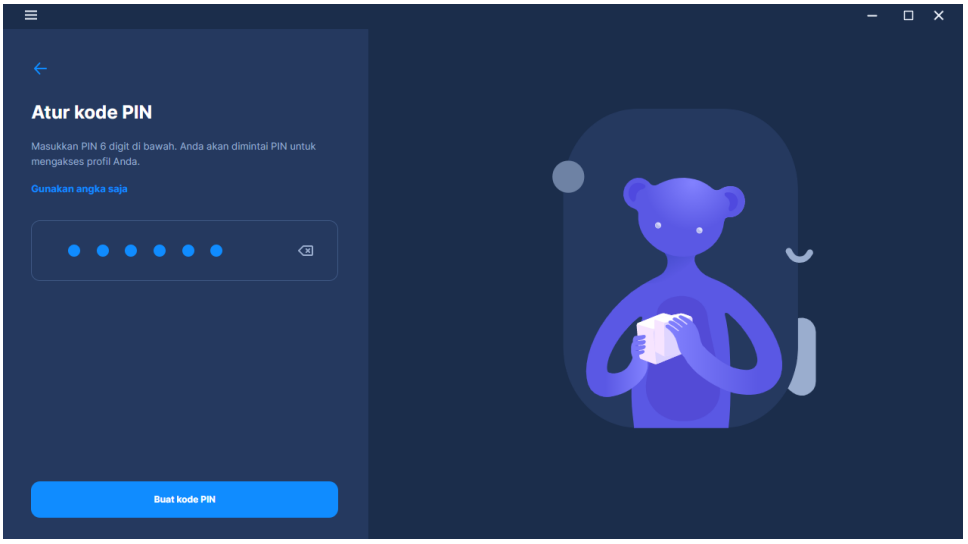




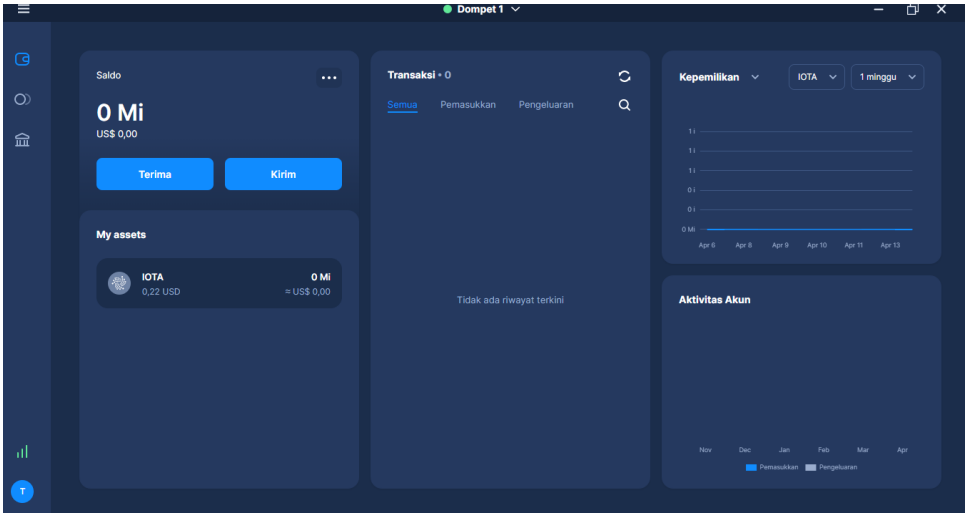
5. Kemudian Membuat Kata Sandi



6. Lalu Atur kode Pin

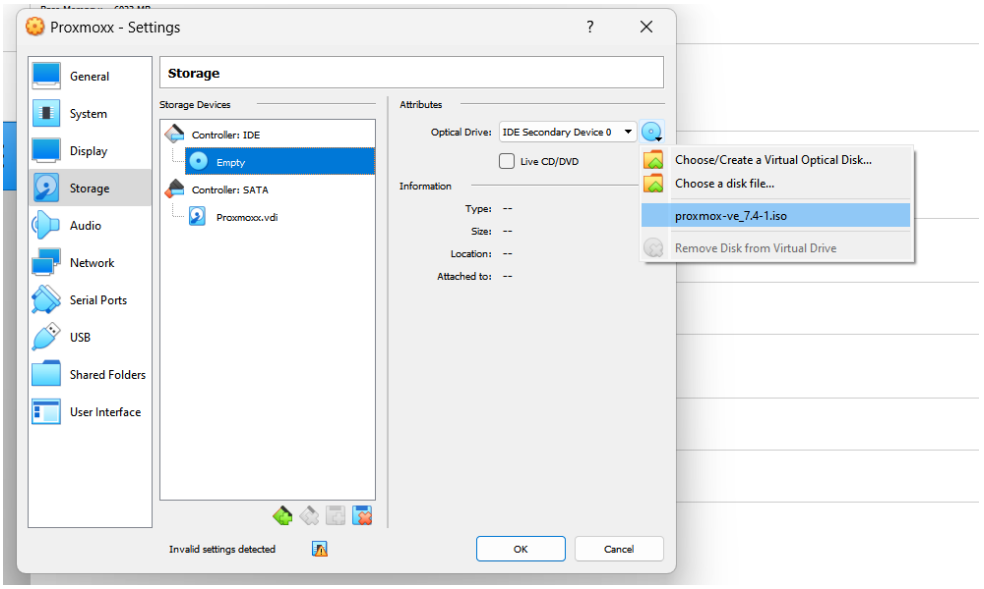


7. Berikut Tampilan Dashboard pada IOTA

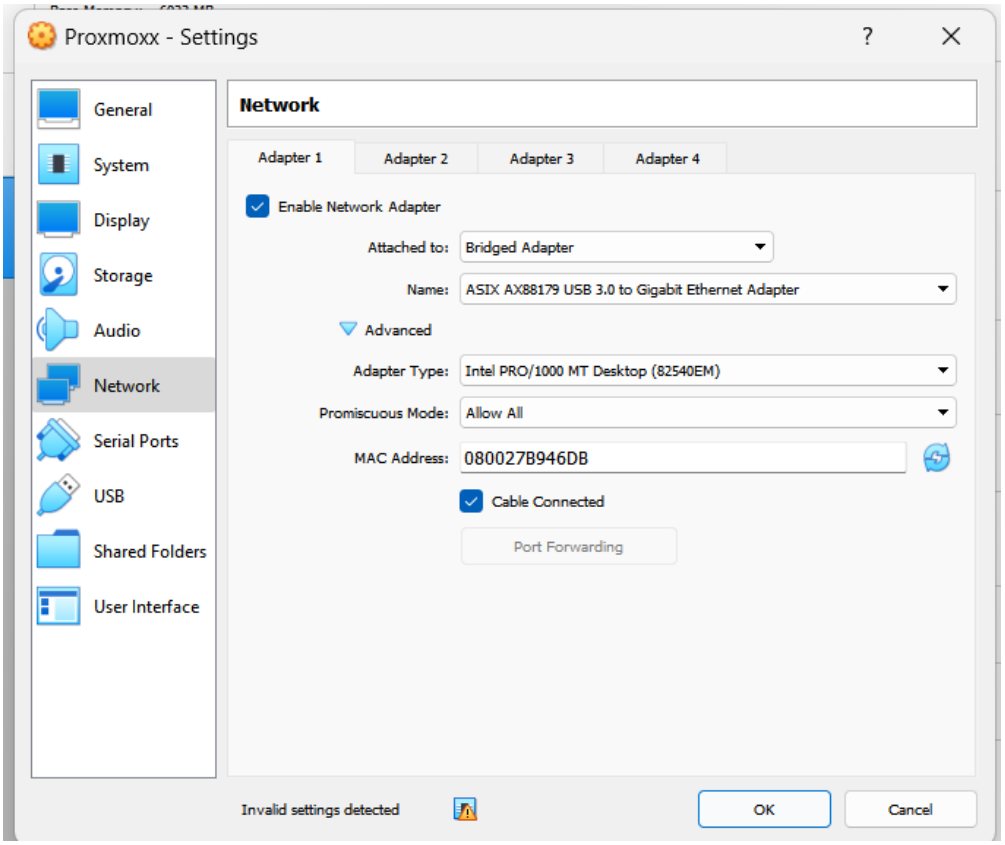


B. Install Proxmox VE for VirtualBox Manager

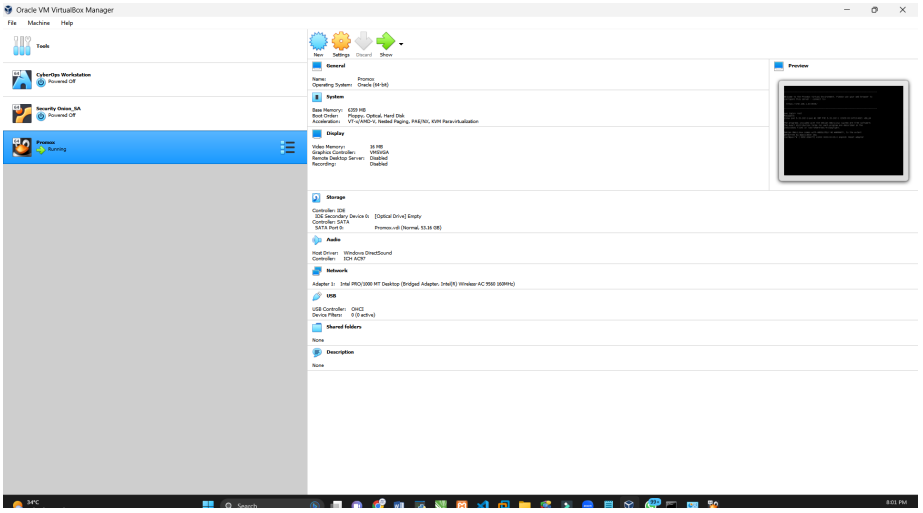
1. Storage ubah IDE menjadi Proxmox



2. Ubah Attached to menjadi Bridged Adapter dan pada Advanced untuk Promiscuous Mode menjadi Allow All lalu OK

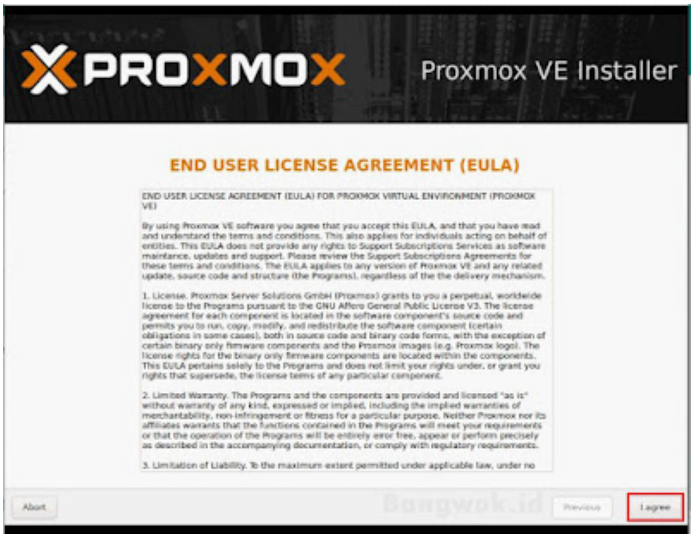


3. Start Proxmox



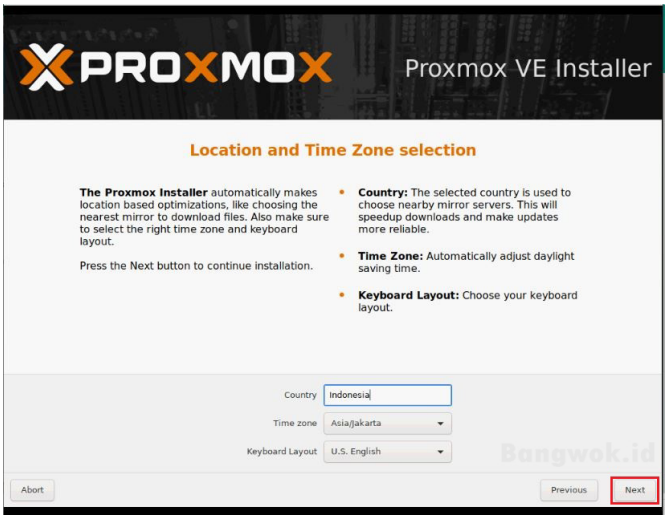
4. Klik Install atau langsung enter

5. lalu klik I Agree

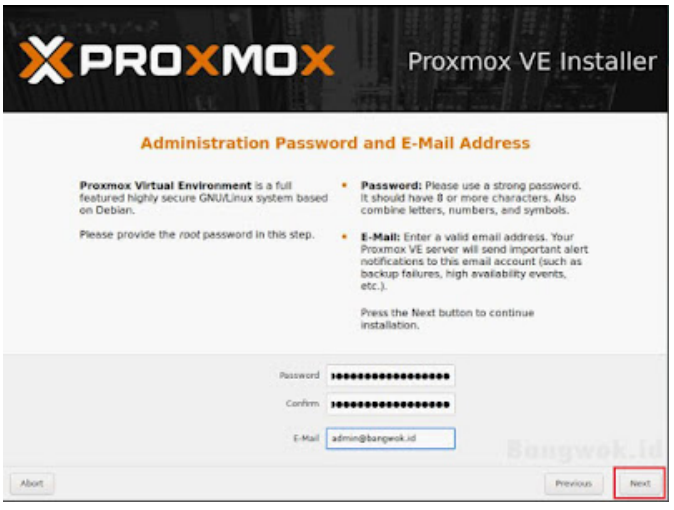


6. Klik Next

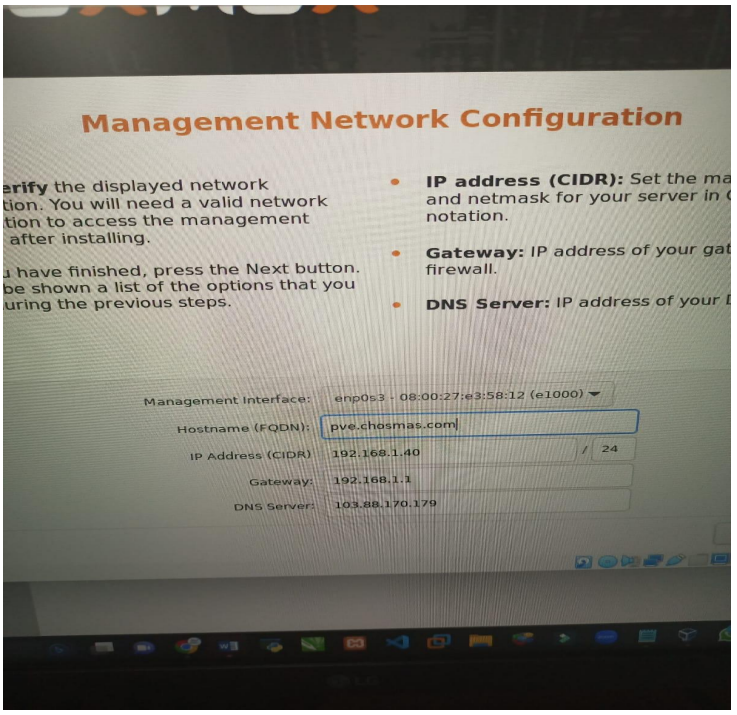
7. Pilih Indonesia lalu next



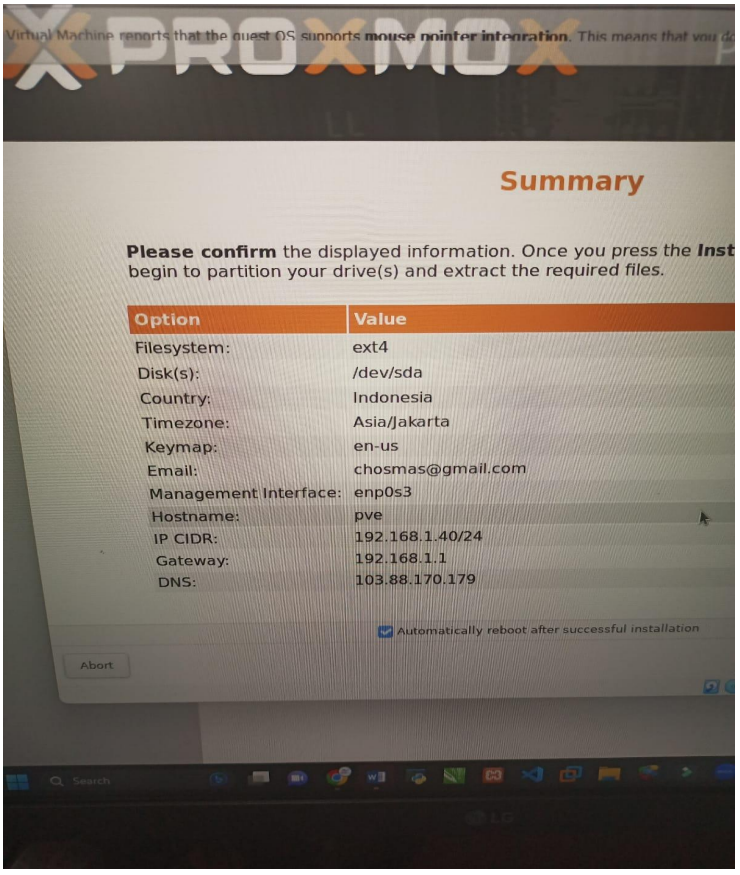
8. Masukan Password dan email anda lalu next



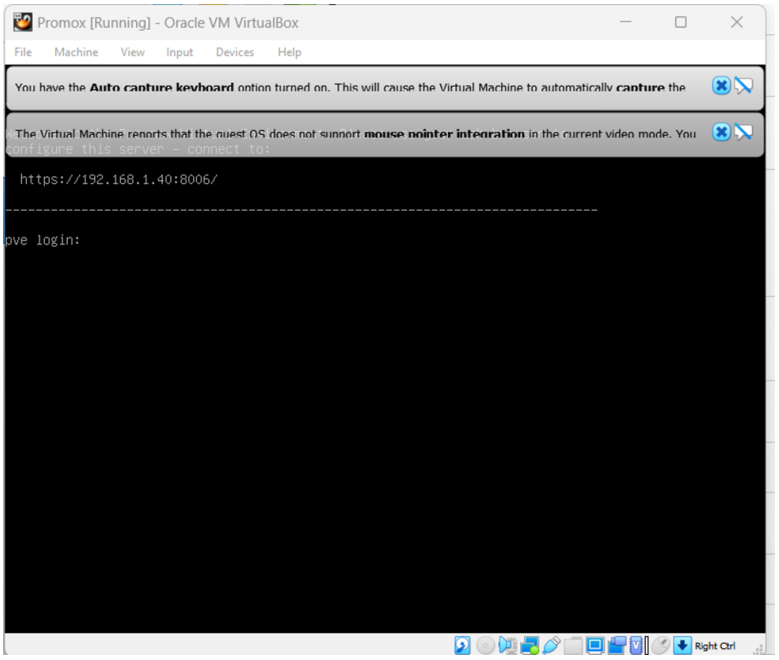
9. Masukan Hostname anda lalu next



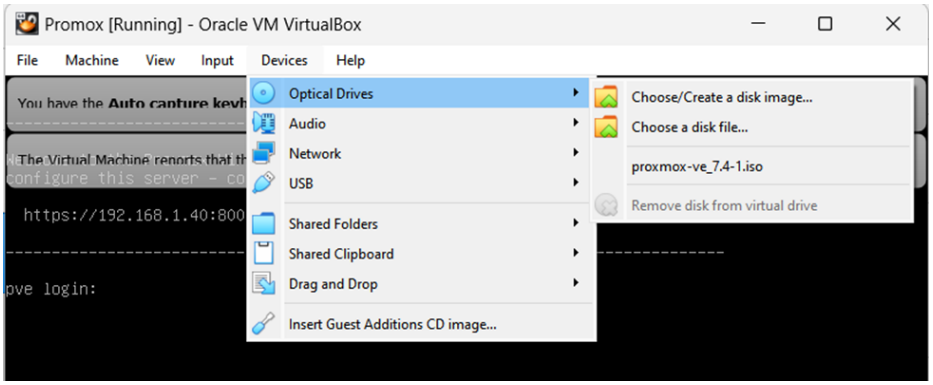
10. Klik Install



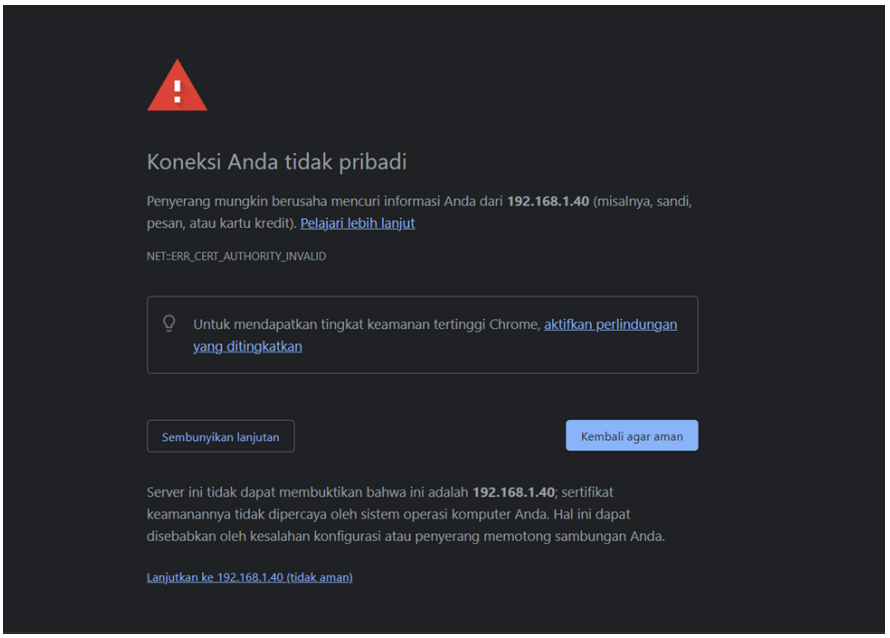
Berikut merupakan tampilan Proxmox IP



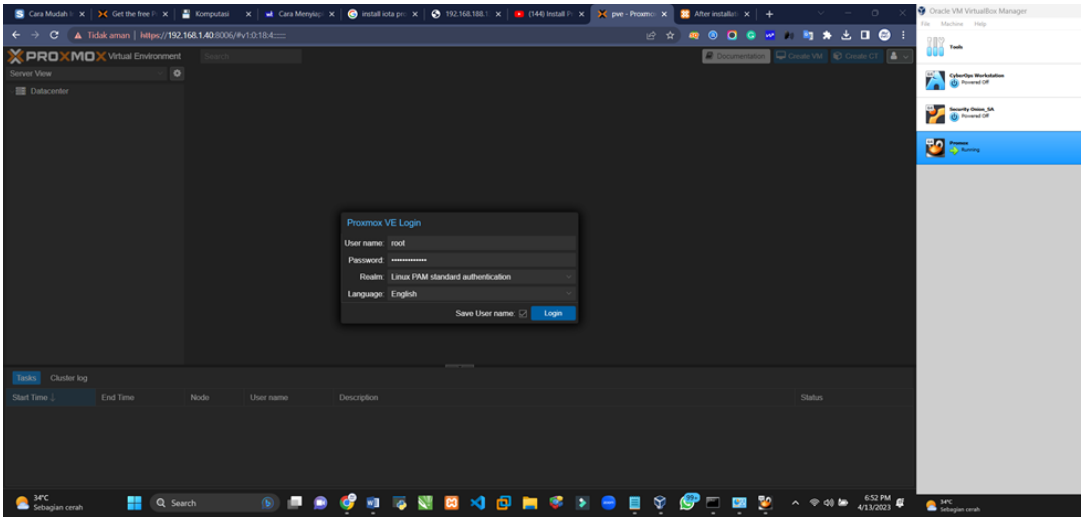
11. Jangan Lupa pada Devices Klik Option lalu cheklis proxmoxnya



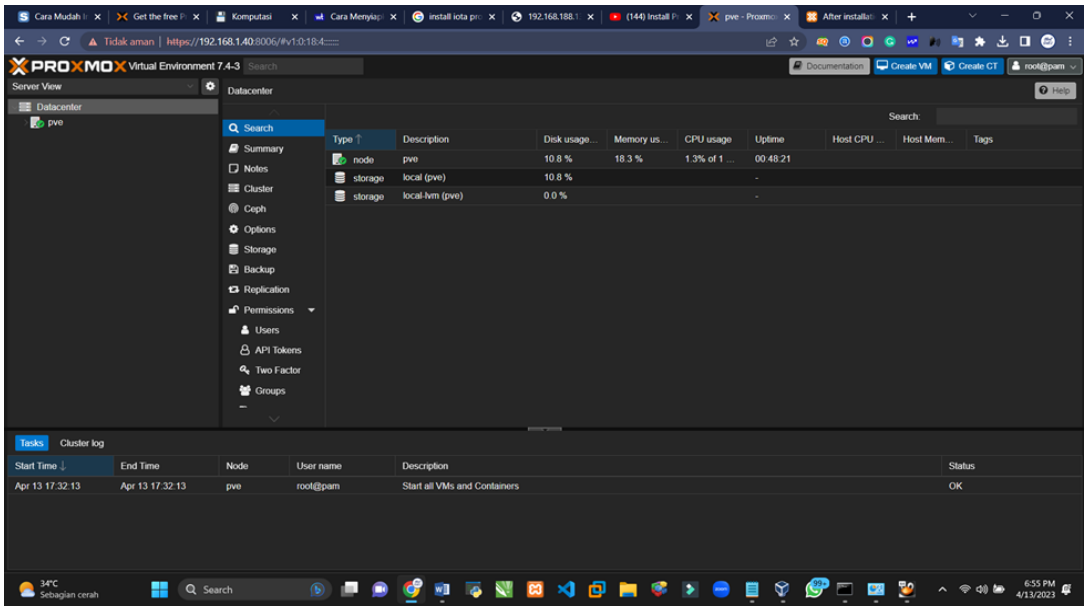
12. Masukkan IP yang tertera pada Proxmox ke web browser



13. Masukan Username dan password

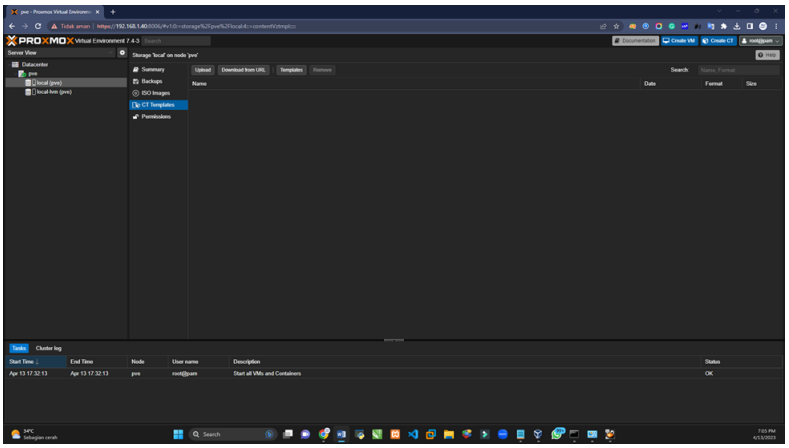


14. Tampilan Proxmox

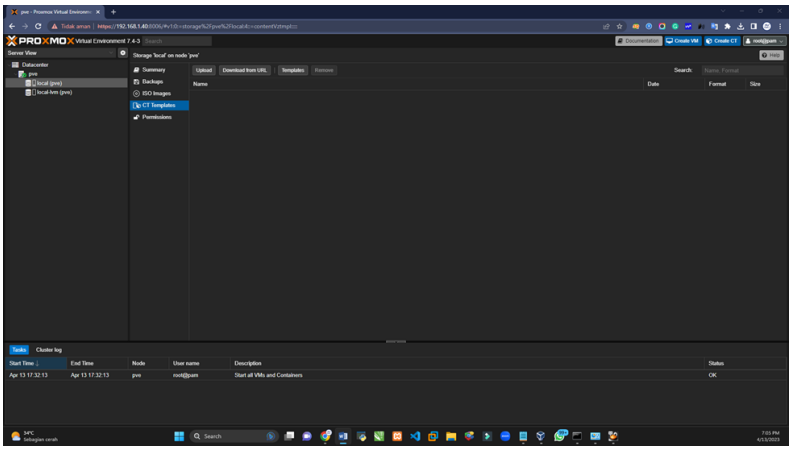


C. Install Docker in Proxmox

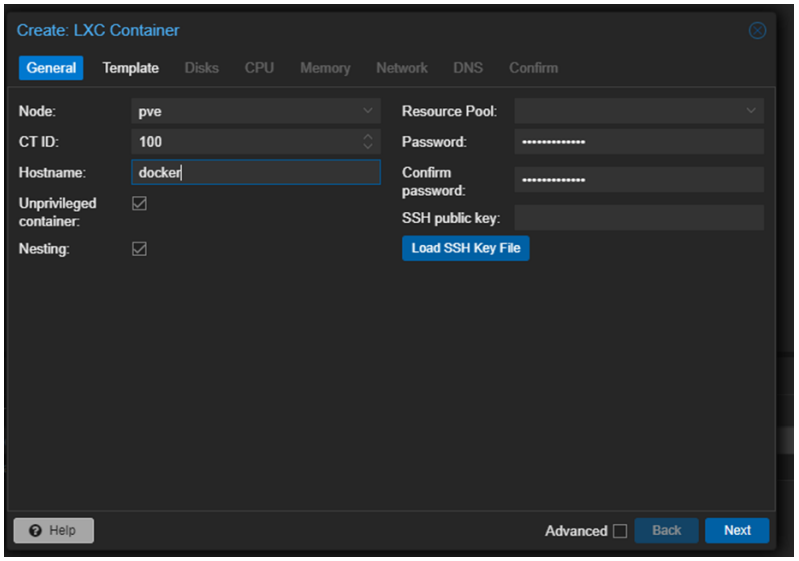
1. Masuk ke Proxmox, pilih lokasi penyimpanan tempat Anda ingin menyimpan template container, pilih CT Templates , lalu pilih Templates.



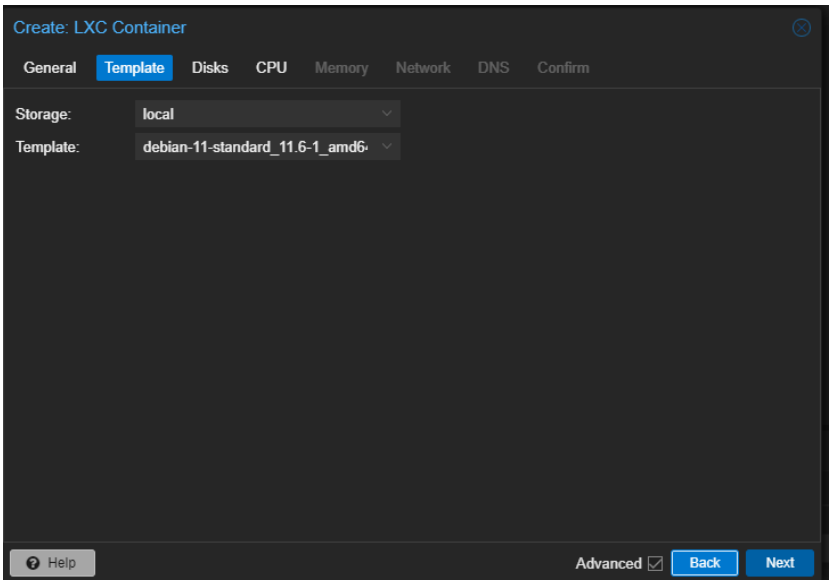
2. Cari Debian , lalu pilih debian-11-standard dan Download.



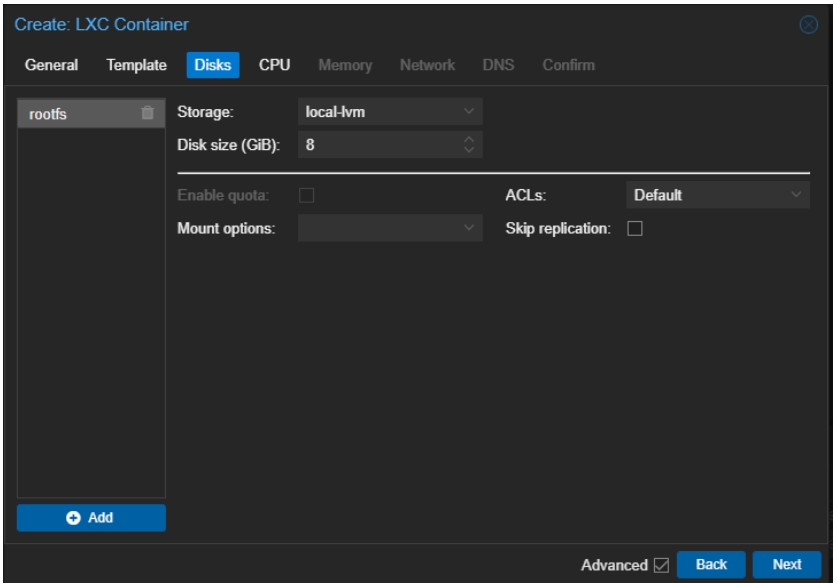
3. Buat CT, masukkan Hostname , lalu masukkan Kata Sandi yang ingin Anda gunakan. Kata sandi ini akan digunakan untuk masuk ke akun pengguna root . Setelah semua pengaturan sudah ditentukan, pilih Next.



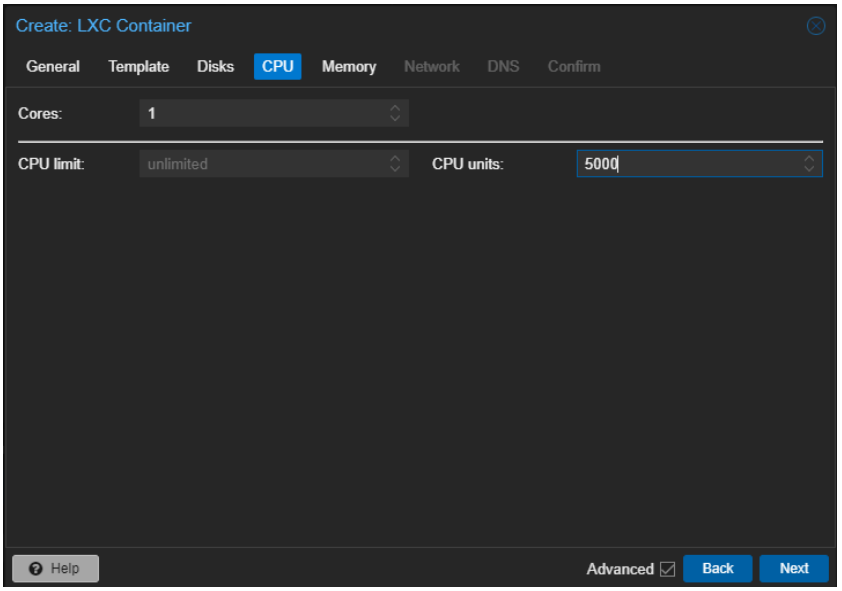
4. Pilih Template , lalu pilih Next untuk melanjutkan.



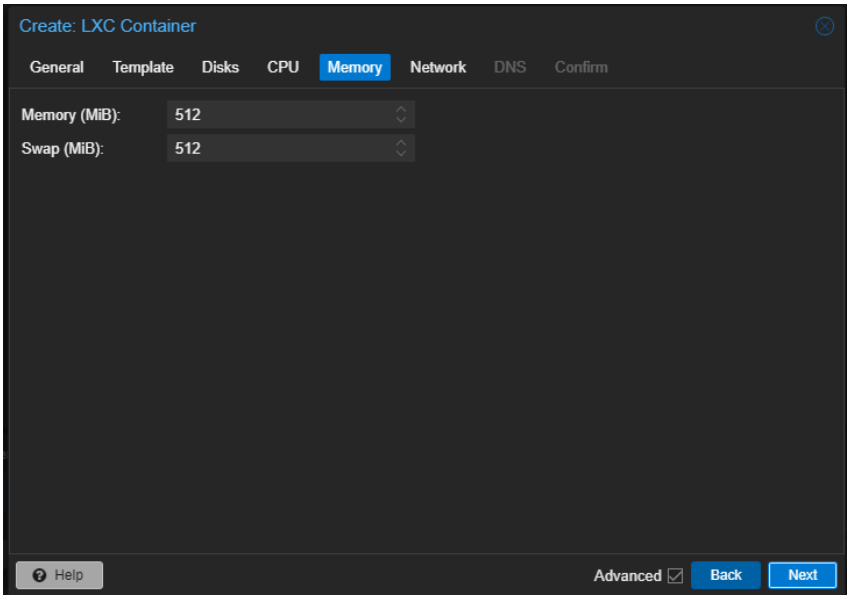
5. Pilih Ukuran Disk untuk wadah ini, lalu pilih Berikutnya.



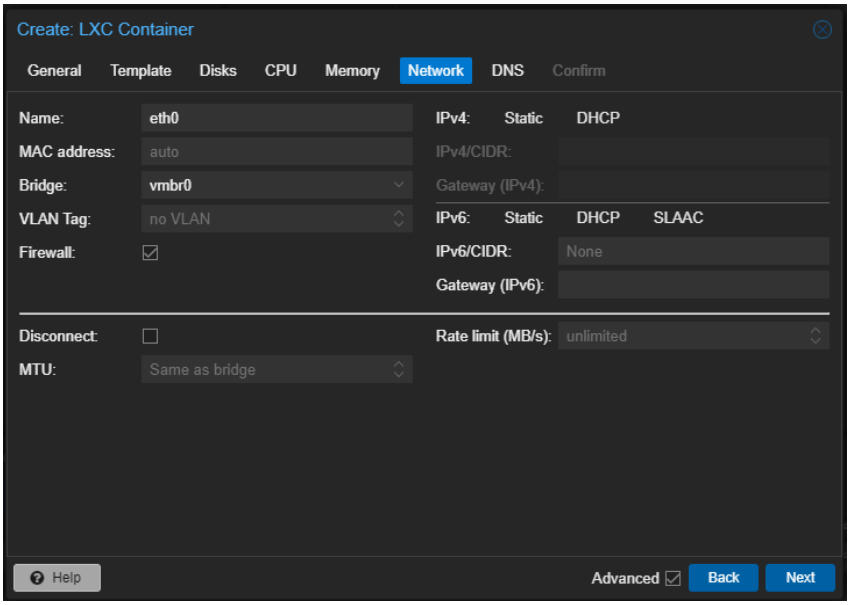
6. Pilih total Core untuk CPU, lalu pilih Next.



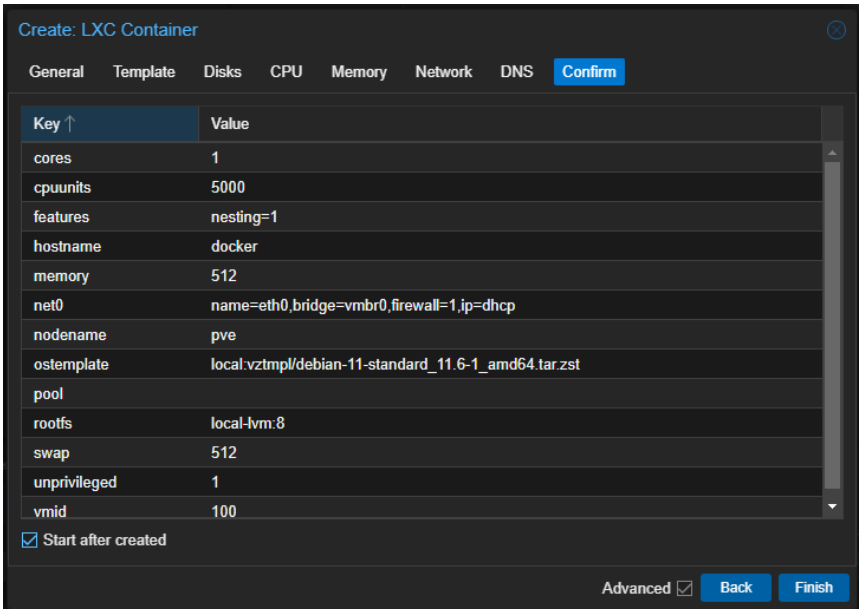
7. Atur total Memory , lalu pilih Next .

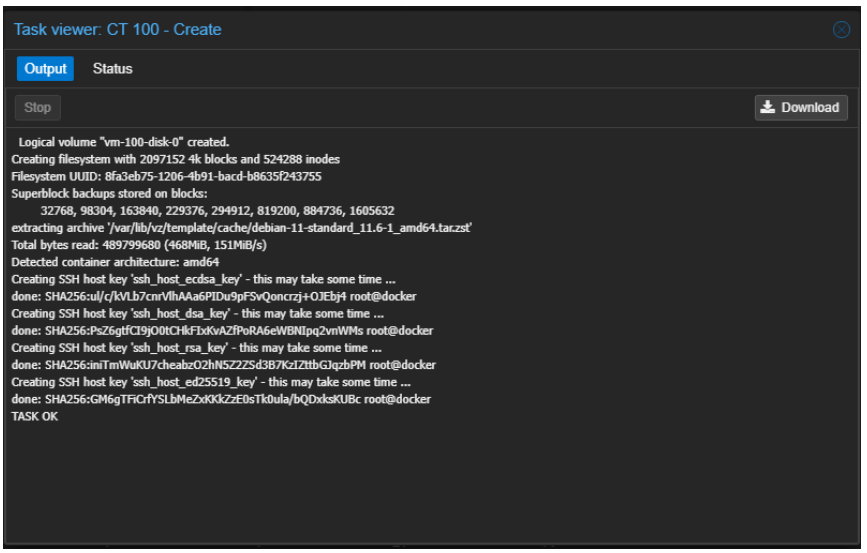


8. Ubah Jaringan untuk menggunakan DHCP untuk IPv4 dan IPv6 (kecuali jika Anda ingin menentukannya secara manual), lalu pilih Berikutnya hingga Anda mendapatkan Konfirmasi.

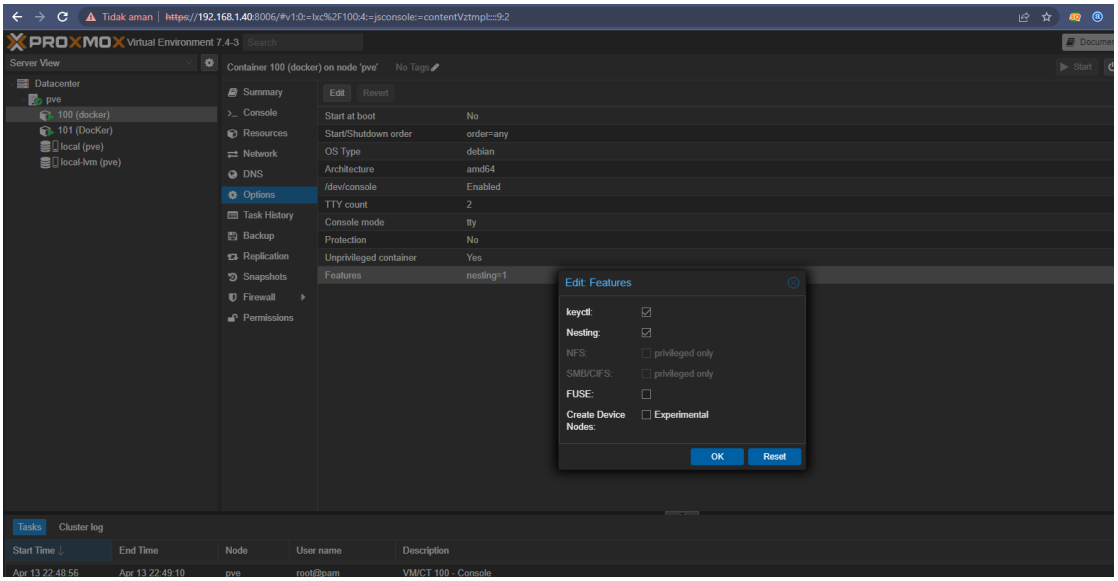


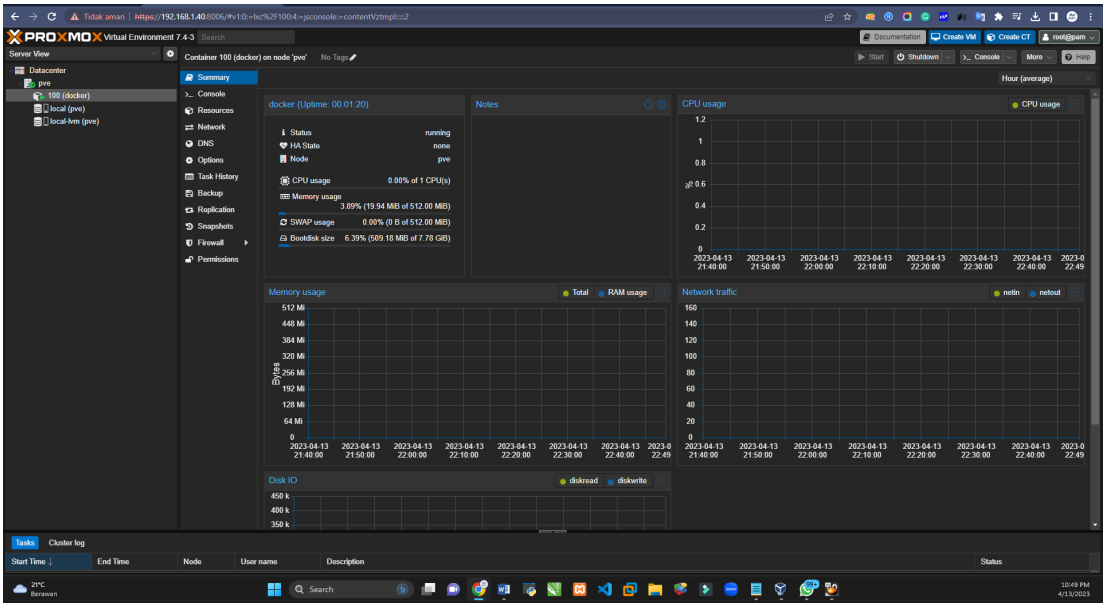
9. Konfirmasikan pengaturan, lalu pilih Selesai untuk membuat penampung!

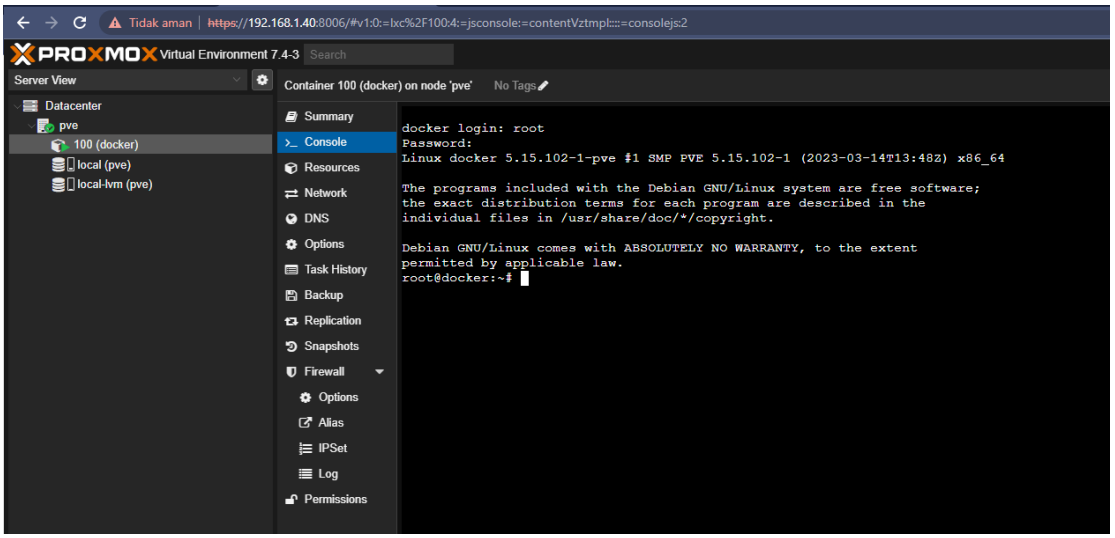




10. Pilih LXC Container yang baru kita buat, lalu pilih Options dan Edit the Features Aktifkan keyctl , lalu pilih OK. Anda sekarang dapat memulai wadah!







11. Setelah penampung dimulai, login dengan nama pengguna root dan kata sandi yang diatur di langkah empat. Jalankan perintah di bawah ini untuk memperbarui sistem.

```
docker login: root
Password:
Welcome to Ubuntu 22.10 (GNU/Linux 5.15.102-1-pve x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.
```

apt update

```
root@docker:~# apt update
Ign:1 http://archive.ubuntu.com/ubuntu kinetic InRelease
Ign:2 http://archive.ubuntu.com/ubuntu kinetic-updates InRelease
Ign:3 http://archive.ubuntu.com/ubuntu kinetic-security InRelease
Ign:1 http://archive.ubuntu.com/ubuntu kinetic InRelease
Ign:2 http://archive.ubuntu.com/ubuntu kinetic-updates InRelease
Ign:3 http://archive.ubuntu.com/ubuntu kinetic-security InRelease
Ign:1 http://archive.ubuntu.com/ubuntu kinetic InRelease
Ign:2 http://archive.ubuntu.com/ubuntu kinetic-updates InRelease
Ign:3 http://archive.ubuntu.com/ubuntu kinetic-security InRelease
Err:1 http://archive.ubuntu.com/ubuntu kinetic InRelease
  Temporary failure resolving 'archive.ubuntu.com'
Err:2 http://archive.ubuntu.com/ubuntu kinetic-updates InRelease
  Temporary failure resolving 'archive.ubuntu.com'
Err:3 http://archive.ubuntu.com/ubuntu kinetic-security InRelease
  Temporary failure resolving 'archive.ubuntu.com'
Reading package lists... Done
Building dependency tree... Done
```

update -ya

```
root@docker:~# apt upgrade -y
Reading package lists... Done
Building dependency tree... Done
Calculating upgrade... Done
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
```

12. Setelah sistem diperbarui, jalankan perintah di bawah ini untuk menginstal curl . Kami akan menggunakan curl untuk menjalankan skrip yang menginstal buruh pelabuhan.

```
root@docker:~# apt install curl -y
Reading package lists... Done
Building dependency tree... Done
The following additional packages will be installed:
  libbrotli1 libcurl4 libldap-2.5-0 libldap-common librtmp1 libssh-4
The following NEW packages will be installed:
  curl libbrotli1 libcurl4 libldap-2.5-0 libldap-common librtmp1 libssh-4
0 upgraded, 7 newly installed, 0 to remove and 0 not upgraded.
Need to get 1253 kB of archives.
After this operation, 3500 kB of additional disk space will be used.
Ign:1 http://archive.ubuntu.com/ubuntu kinetic/main amd64 libbrotli1 amd64 1.0.9-2build6
Ign:2 http://archive.ubuntu.com/ubuntu kinetic/main amd64 libldap-2.5-0 amd64 2.5.13+dfsg-1ubuntu1
Ign:3 http://archive.ubuntu.com/ubuntu kinetic/main amd64 librtmp1 amd64 2.4+20151223.gitfa8646d.1-2build4
Ign:4 http://archive.ubuntu.com/ubuntu kinetic/main amd64 libssh-4 amd64 0.9.6-2build1
Ign:5 http://archive.ubuntu.com/ubuntu kinetic/main amd64 libcurl4 amd64 7.85.0-1
Ign:6 http://archive.ubuntu.com/ubuntu kinetic/main amd64 curl amd64 7.85.0-1
Ign:7 http://archive.ubuntu.com/ubuntu kinetic/main amd64 libldap-common all 2.5.13+dfsg-1ubuntu1
Ign:1 http://archive.ubuntu.com/ubuntu kinetic/main amd64 libbrotli1 amd64 1.0.9-2build6
Ign:2 http://archive.ubuntu.com/ubuntu kinetic/main amd64 libldap-2.5-0 amd64 2.5.13+dfsg-1ubuntu1
Ign:3 http://archive.ubuntu.com/ubuntu kinetic/main amd64 librtmp1 amd64 2.4+20151223.gitfa8646d.1-2build4
Ign:4 http://archive.ubuntu.com/ubuntu kinetic/main amd64 libssh-4 amd64 0.9.6-2build1
Ign:5 http://archive.ubuntu.com/ubuntu kinetic/main amd64 libcurl4 amd64 7.85.0-1
Ign:6 http://archive.ubuntu.com/ubuntu kinetic/main amd64 curl amd64 7.85.0-1
Ign:7 http://archive.ubuntu.com/ubuntu kinetic/main amd64 libldap-common all 2.5.13+dfsg-1ubuntu1
Ign:1 http://archive.ubuntu.com/ubuntu kinetic/main amd64 libbrotli1 amd64 1.0.9-2build6
Ign:2 http://archive.ubuntu.com/ubuntu kinetic/main amd64 libldap-2.5-0 amd64 2.5.13+dfsg-1ubuntu1
```

apt install docker.io

```
root@Test-CT:~# apt install docker.io
Reading package lists... Done
Building dependency tree... Done
The following additional packages will be installed:
  bridge-utils containerd dns-root-data dnsmasq-base git git-man libasn1-8-heimdal libbrotli1 libcurl3-gnutls liberror-perl lib
  libhcrypto4-heimdal libheimbase1-heimdal libheimntlm0-heimdal libhx509-5-heimdal libidn11 libkrb5-26-heimdal libldap-2.4-2 li
  libroken18-heimdal librtmp1 libseccomp2 libssh-4 libwind0-heimdal patch perl perl-base perl-modules-5.30 pigz runc ubuntu-fa
Suggested packages:
  ifupdown aufs-tools btrfs-progs cgroupfs-mount | cgroup-lite debootstrap docker-doc rinse zfs-fuse | zfsutils git-daemon-run
  git-email git-gui gitk gitweb git-cvs git-mediawiki git-svn diffutils-doc perl-doc libterm-readline-gnu-perl | libterm-readli
  liblocale-codes-perl
The following NEW packages will be installed:
  bridge-utils containerd dns-root-data dnsmasq-base docker.io git git-man libasn1-8-heimdal libbrotli1 libcurl3-gnutls liberro
  libgssapi3-heimdal libhcrypto4-heimdal libheimbase1-heimdal libheimntlm0-heimdal libhx509-5-heimdal libidn11 libkrb5-26-heimd
  libnghttp2-14 libperl5.30 libroken18-heimdal librtmp1 libssh-4 libwind0-heimdal patch perl perl-modules-5.30 pigz runc ubuntu
The following packages will be upgraded:
```

apt install docker-compose

```
root@Test-CT:~# docker --version
Docker version 20.10.12, build 20.10.12-0ubuntu2~20.04.1
root@Test-CT:~# docker-compose

Command 'docker-compose' not found, but can be installed with:

apt install docker-compose

root@Test-CT:~# apt install docker-compose
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  python3-attr python3-cached-property python3-certifi python3-chardet python3-distutils python3-docker python3-dockerpty pytho
  python3-importlib-metadata python3-jsonschema python3-lib2to3 python3-more-itertools python3-pyrsistent python3-requests pyth
  python3-urllib3 python3-websocket python3-zipp
Suggested packages:
  python-attr-doc python-jsonschema-doc python3-cryptography python3-openssl python3-socks python-setuptools-doc
The following NEW packages will be installed:
  docker-compose python3-attr python3-cached-property python3-certifi python3-chardet python3-distutils python3-docker python3-
  python3-importlib-metadata python3-jsonschema python3-lib2to3 python3-more-itertools python3-pyrsistent python3-requests pyth
  python3-urllib3 python3-websocket python3-zipp
0 upgraded, 21 newly installed, 0 to remove and 166 not upgraded.
Need to get 1392 kB of archives.
After this operation, 7856 kB of additional disk space will be used.
Do you want to continue? [Y/n]
```

13. Run Docker

```
root@Test-CT:~# docker-compose --version
docker-compose version 1.29.2, build 5becea4c
root@Test-CT:~# docker run hello-world
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world
2db29710123e: Pull complete
Digest: sha256:80f31da1ac7b312ba29d65080fddf797dd76acfb870e677f390d5acba9741b17
Status: Downloaded newer image for hello-world:latest

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
 1. The Docker client contacted the Docker daemon.
 2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
    (amd64)
 3. The Docker daemon created a new container from that image which runs the
    executable that produces the output you are currently reading.
 4. The Docker daemon streamed that output to the Docker client, which sent it
    to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
 $ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
 https://hub.docker.com/

For more examples and ideas, visit:
 https://docs.docker.com/get-started/
```