

LAPORAN

KUIS 1

BIG DATA



4K – RPL – Kelompok 3

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D-IV TEKNIK INFORMATIKA

TEKNOLOGI INFORMASI

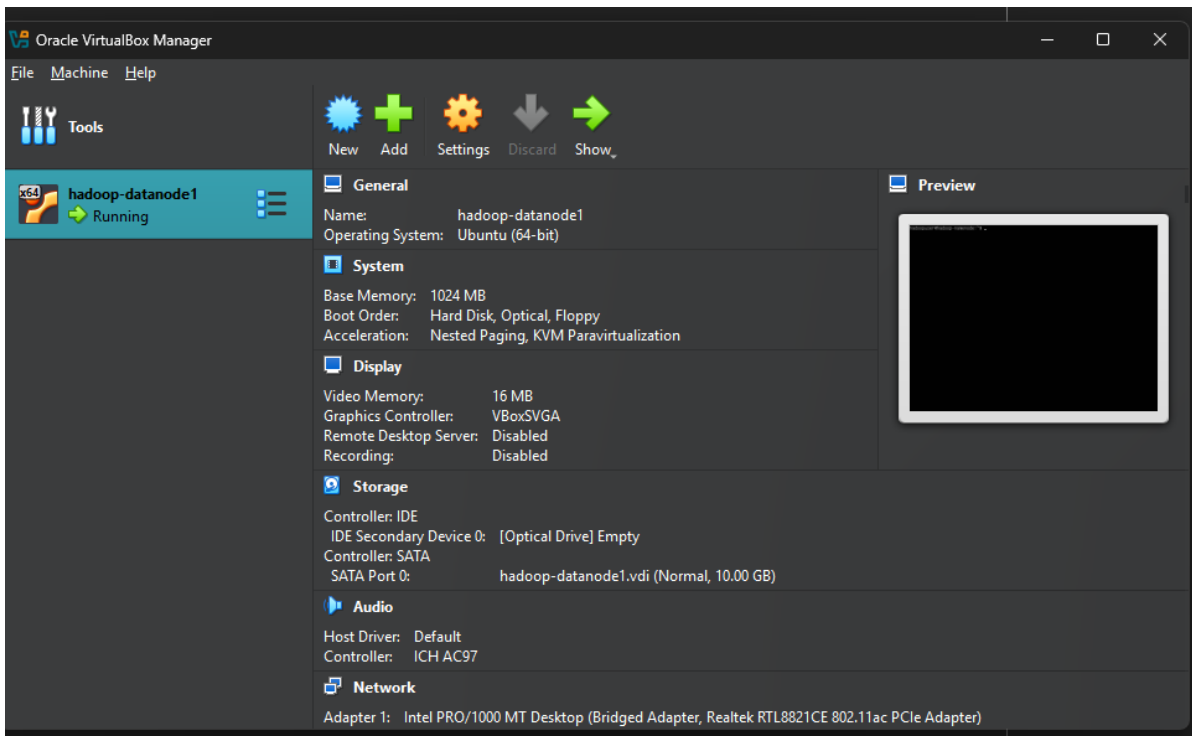
POLITEKNIK NEGERI MALANG

2025

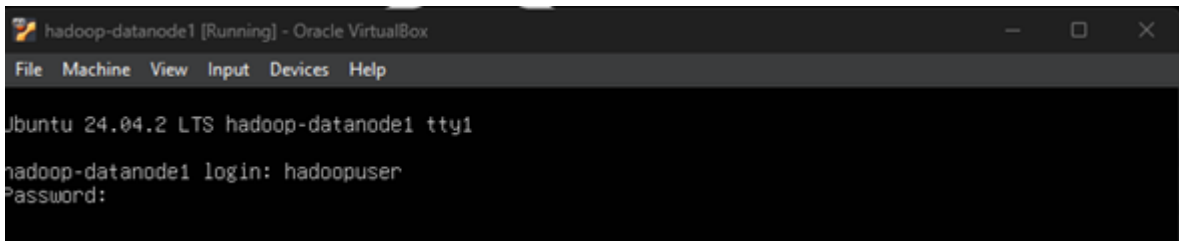
Kuis 1

1. Datanode 1 (Frankie)

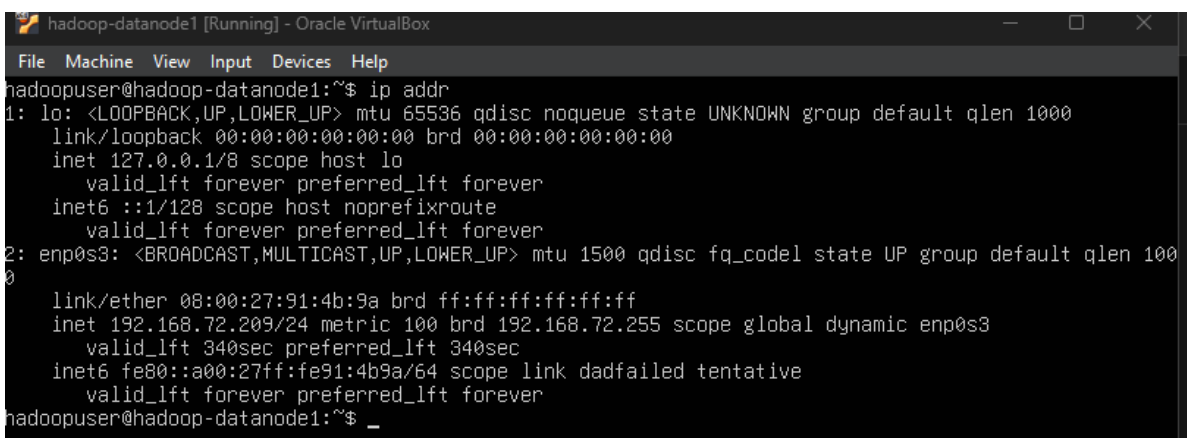
a. Hasil instalasi



b. Login Hadoop



c. Alamat IP : 192.168.72.209



d. Setting /etc/hosts

```
hadoop-datanode1 [Running] - Oracle VirtualBox
File Machine View Input Devices Help
GNU nano 7.2 /etc/hosts *
127.0.0.1 localhost

# The following lines are desirable for IPv6 capable hosts
::1 ip6-localhost ip6-loopback
fe00::0 ip6-localnet
ff00::0 ip6-mcastprefix
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters

# Hadoop cluster nodes
192.168.72.49 hadoop-namenode
192.168.72.209 hadoop-datanode1
192.168.72.173 hadoop-datanode2
192.168.72.93 hadoop-datanode3
```

e. Menghubungkan ke cluster namenode

```
hadoop-datanode1 [Running] - Oracle VirtualBox
File Machine View Input Devices Help
hadoopuser@hadoop-datanode1:~$ ssh hadoopuser@192.168.72.49
hadoopuser@192.168.72.49's password:
Welcome to Ubuntu 24.04.2 LTS (GNU/Linux 6.8.0-53-generic x86_64)

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

System information as of Tue Mar 18 06:40:18 AM UTC 2025

System load:  0.0          Processes:            125
Usage of /:   62.5% of 9.74GB Users logged in:          1
Memory usage: 67%          IPv4 address for enp0s3: 192.168.72.49
Swap usage:   0%

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

Last login: Tue Mar 18 06:30:31 2025 from 192.168.72.173
hadoopuser@hadoop-namenode:~$
```

f. Membuat Folder pribadi

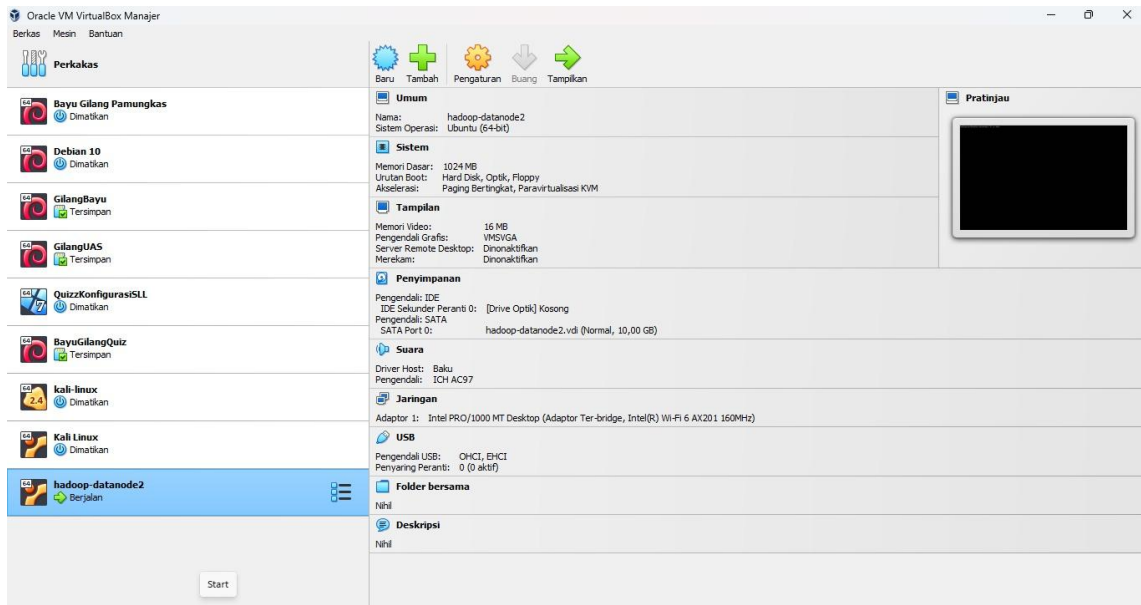
```
hadoop-datanode1 [Running] - Oracle VirtualBox
File Machine View Input Devices Help
hadoopuser@hadoop-namenode:~/fs$ ls
hadoopuser@hadoop-namenode:~/fs$ cd ..
hadoopuser@hadoop-namenode:~$ ls
fs kelompok3 kelompok4 profil-jti-polinema.mp4 snap
hadoopuser@hadoop-namenode:~$ cd Kelompok3
hadoopuser@hadoop-namenode:~/Kelompok3$ ls
09_M-Agung-Wibowo
hadoopuser@hadoop-namenode:~/Kelompok3$ mkdir 07_FrankieSteinlie
hadoopuser@hadoop-namenode:~/Kelompok3$ ls
07_FrankieSteinlie 09_M-Agung-Wibowo
hadoopuser@hadoop-namenode:~/Kelompok3$ cd 07_FrankieSteinlie
hadoopuser@hadoop-namenode:~/Kelompok3/07_FrankieSteinlie$ _
```

g. Membuat file txt

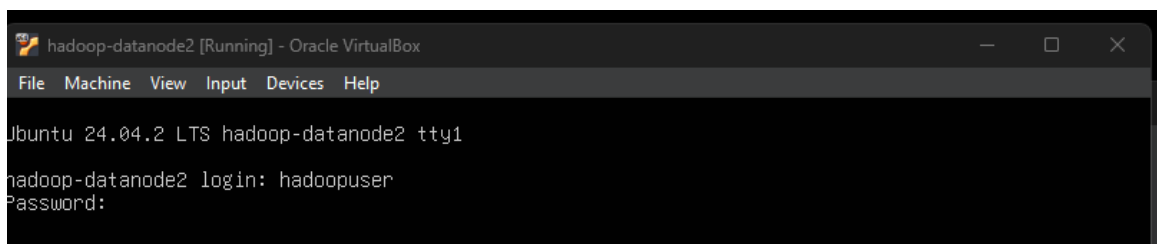
```
hadoopuser@hadoop-namenode:~/Kelompok3$ ls
07_FrankieSteinlie  09_M-Agung-Wibowo
hadoopuser@hadoop-namenode:~/Kelompok3$ cd 07_FrankieSteinlie
hadoopuser@hadoop-namenode:~/Kelompok3/07_FrankieSteinlie$ ls
Frankie.txt
hadoopuser@hadoop-namenode:~/Kelompok3/07_FrankieSteinlie$ cat Frankie.txt
No Absen : 07
Nama : Frankie Steinlie
NIM : 244107027008
hadoopuser@hadoop-namenode:~/Kelompok3/07_FrankieSteinlie$ _
```

2. Datanode 2 (Bayu)

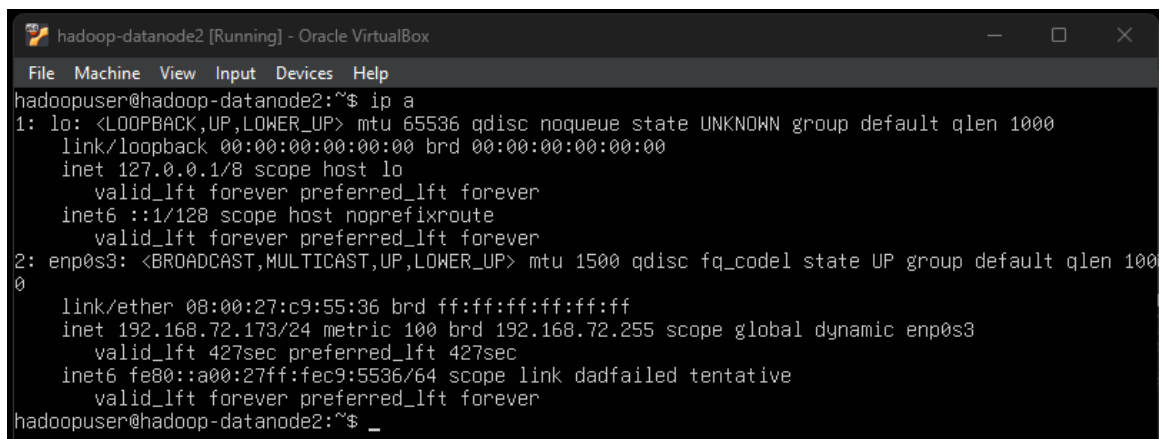
a. Hasil Instalasi



b. Login Hadoop



c. Alamat IP : 192.168.72.173



d. Setting /etc/hosts

```
hadoop-datanode2 [Running] - Oracle VirtualBox
File Machine View Input Devices Help
GNU nano 7.2 /etc/hosts
127.0.0.1 localhost

# The following lines are desirable for IPv6 capable hosts
::1 ip6-localhost ip6-loopback
fe00::0 ip6-localnet
ff00::0 ip6-mcastprefix
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters

# Hadoop cluster nodes
192.168.72.49 hadoop-namenode
192.168.72.209 hadoop-datanode1
192.168.72.173 hadoop-datanode2
192.168.72.93 hadoop-datanode3
```

e. Menghubungkan ke cluster namenode

```
hadoop-datanode2 [Running] - Oracle VirtualBox
File Machine View Input Devices Help
hadoopuser@hadoop-datanode2:~$ ssh hadoopuser@192.168.72.49
hadoopuser@192.168.72.49's password:
Welcome to Ubuntu 24.04.2 LTS (GNU/Linux 6.8.0-53-generic x86_64)

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

System information as of Tue Mar 18 07:06:31 AM UTC 2025

System load:  0.01          Processes:            155
Usage of /:   62.7% of 9.74GB Users logged in:             1
Memory usage: 17%          IPv4 address for enp0s3: 192.168.72.49
Swap usage:   0%

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 07:03:23 2025 from 192.168.72.49
hadoopuser@hadoop-namenode:~$
```

f. Membuat Folder pribadi

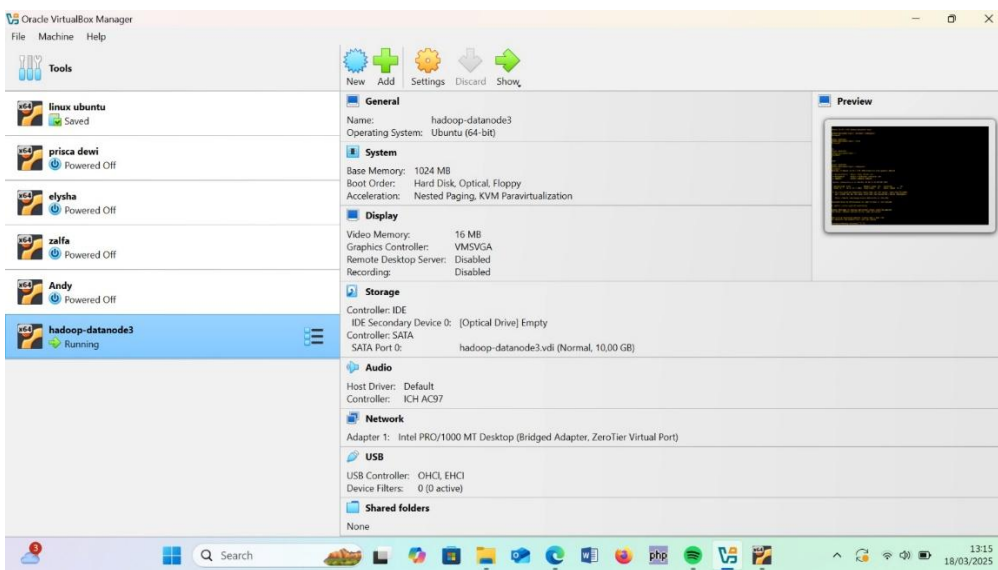
```
hadoop-datanode2 [Running] - Oracle VirtualBox
File Machine View Input Devices Help
hadoopuser@hadoop-namenode:~$ ls
fs_kelompok3 kelompok4 profil-jti-polinema.mp4 snap
hadoopuser@hadoop-namenode:~$ cd Kelompok3
hadoopuser@hadoop-namenode:~/Kelompok3$ ls
07_FrankieSteinlie 09_M-Agung-Wibowo
hadoopuser@hadoop-namenode:~/Kelompok3$ mkdir 03_BayuGilangPamungkas
hadoopuser@hadoop-namenode:~/Kelompok3$ ls
03_BayuGilangPamungkas 07_FrankieSteinlie 09_M-Agung-Wibowo
hadoopuser@hadoop-namenode:~/Kelompok3$ _
```

- g. Membuat file txt

```
hadoop-datanode2 [Running] - Oracle VirtualBox
File Machine View Input Devices Help
hadoopuser@hadoop-namenode:~/Kelompok3$ cd 03_BayuGilangPamungkas
hadoopuser@hadoop-namenode:~/Kelompok3/03_BayuGilangPamungkas$ ls
hadoopuser@hadoop-namenode:~/Kelompok3/03_BayuGilangPamungkas$ echo "Absen : 03 Nama : Bayu Gilang P
amungkas" > myinfo.txt
hadoopuser@hadoop-namenode:~/Kelompok3/03_BayuGilangPamungkas$ ls
myinfo.txt
hadoopuser@hadoop-namenode:~/Kelompok3/03_BayuGilangPamungkas$ cat myinfo.txt
Absen : 03 Nama : Bayu Gilang Pamungkas
hadoopuser@hadoop-namenode:~/Kelompok3/03_BayuGilangPamungkas$ _
```

3. Datanode 3 (Prisca)

- a. Hasil instalasi



- b. Login Hadoop

```
hadoop-datanode3 [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Ubuntu 24.04.2 LTS hadoop-datanode3 tty1
hadoop-datanode3 login: hadoopuser
Password: _
```

- c. Alamat IP : 192.168.72.93

```
hadoop-datanode3 [Running] - Oracle VirtualBox
File Machine View Input Devices Help
hadoopuser@hadoop-datanode3:~$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host noprefixroute
        valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 08:00:27:a6:58:94 brd ff:ff:ff:ff:ff:ff
    inet 192.168.72.93/24 metric 100 brd 192.168.72.255 scope global dynamic enp0s3
        valid_lft 465sec preferred_lft 465sec
    inet6 fe80::a00:27ff:fea6:5894/64 scope link
        valid_lft forever preferred_lft forever
hadoopuser@hadoop-datanode3:~$
```

d. Setting /etc/hosts

```
hadoop-datanode3 [Running] - Oracle VirtualBox
File Machine View Input Devices Help
GNU nano 7.2 /etc/hosts
127.0.0.1 localhost

# The following lines are desirable for IPv6 capable hosts
::1 ip6-localhost ip6-loopback
fe00::0 ip6-localnet
ff00::0 ip6-mcastprefix
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters

# Hadoop cluster nodes
192.168.72.49 hadoop-namenode
192.168.72.209 hadoop-datanode1
192.168.72.173 hadoop-datanode2
192.168.72.93 hadoop-datanode3
```

e. Menghubungkan ke cluster namenode

```
hadoop-datanode3 [Running] - Oracle VirtualBox
File Machine View Input Devices Help
hadoopuser@hadoop-namenode:~$ ls
kelompok_4 profil-jti-polinema.mp4 snap
hadoopuser@hadoop-namenode:~$ client_loop: send disconnect: Broken pipe
hadoopuser@hadoop-datanode3:~$ ssh hadoopuser@192.168.72.49
hadoopuser@192.168.72.49's password:
Welcome to Ubuntu 24.04.2 LTS (GNU/Linux 6.8.0-53-generic x86_64)

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

System information as of Tue Mar 18 06:35:57 AM UTC 2025

System load:  0.1               Processes:    166
Usage of /:   62.2% of 9.74GB   Users logged in: 1
Memory usage: 16%              IPv4 address for enp0s3: 192.168.72.49
Swap usage:   0%

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

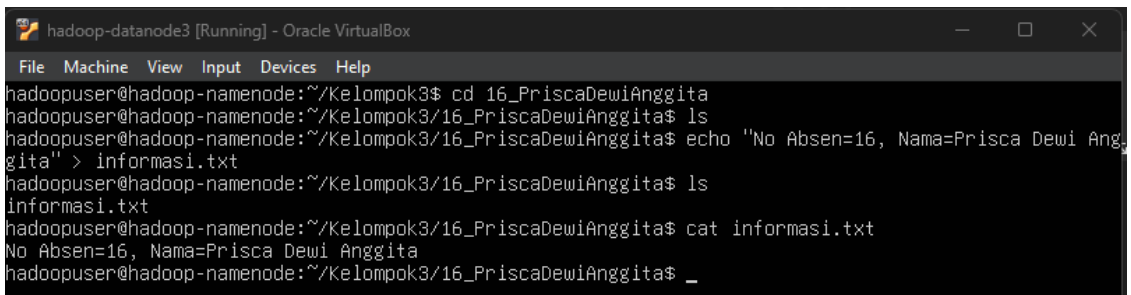
The list of available updates is more than a week old.
To check for new updates run: sudo apt update
Failed to connect to https://changelogs.ubuntu.com/meta-release-lts. Check your Internet connection
or proxy settings

Last login: Tue Mar 18 06:33:23 2025 from 192.168.72.93
hadoopuser@hadoop-namenode:~$
```

f. Membuat Folder pribadi

```
hadoop-datanode3 [Running] - Oracle VirtualBox
File Machine View Input Devices Help
hadoopuser@hadoop-namenode:~$ ls
fs_kelompok3 kelompok4 profil-jti-polinema.mp4 snap
hadoopuser@hadoop-namenode:~$ cd Kelompok3
hadoopuser@hadoop-namenode:~/Kelompok3$ mkdir 16_PriscaDewiAnggita
hadoopuser@hadoop-namenode:~/Kelompok3$ ls
03_BayuGilangPamungkas 07_FrankieSteinlie 09_M-Agung-Wibowo 16_PriscaDewiAnggita
hadoopuser@hadoop-namenode:~/Kelompok3$
```

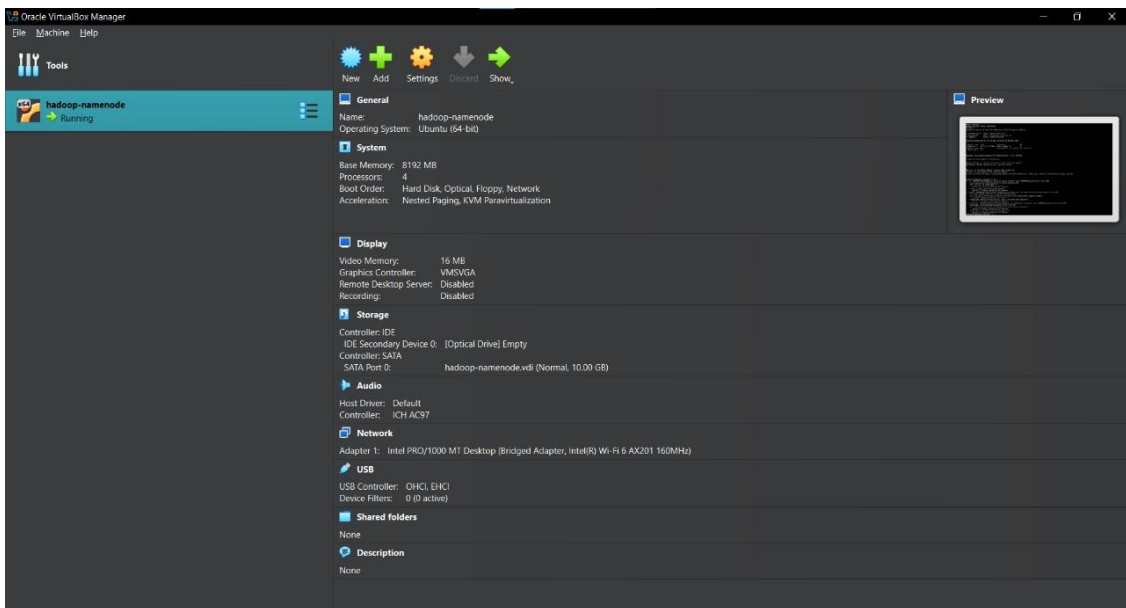
- g. Membuat file txt



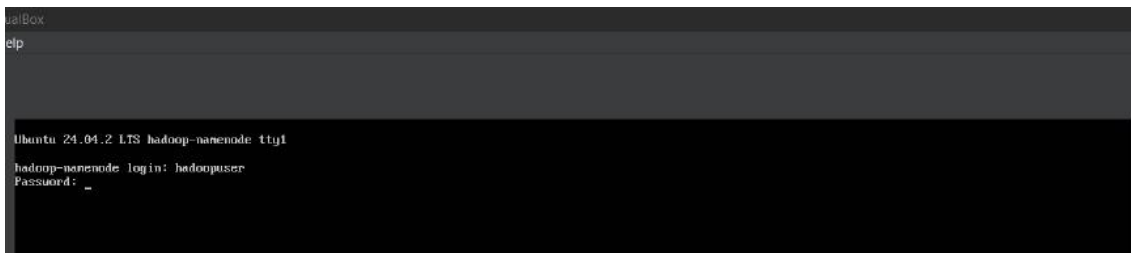
```
hadoop-datanode3 [Running] - Oracle VirtualBox
File Machine View Input Devices Help
hadoopuser@hadoop-namenode:~/Kelompok3$ cd 16_PriscaDewiAnggita
hadoopuser@hadoop-namenode:~/Kelompok3/16_PriscaDewiAnggita$ ls
hadoopuser@hadoop-namenode:~/Kelompok3/16_PriscaDewiAnggita$ echo "No Absen=16, Nama=Prisca Dewi Anggita" > informasi.txt
hadoopuser@hadoop-namenode:~/Kelompok3/16_PriscaDewiAnggita$ ls
informasi.txt
hadoopuser@hadoop-namenode:~/Kelompok3/16_PriscaDewiAnggita$ cat informasi.txt
No Absen=16, Nama=Prisca Dewi Anggita
hadoopuser@hadoop-namenode:~/Kelompok3/16_PriscaDewiAnggita$ _
```

4. Namenode (Agung)

- a. Hasil instalasi



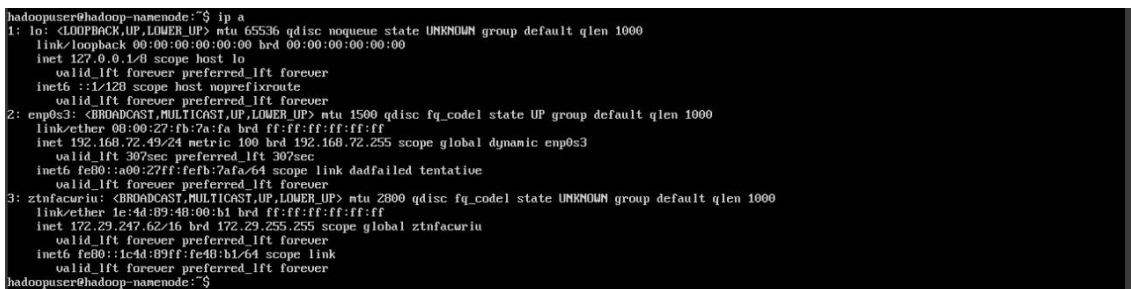
- b. Login Hadoop



```
hadoopuser@hadoop-namenode:~$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host noprefixroute
        valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 08:00:27:fb:7a:fa brd ff:ff:ff:ff:ff:ff
    inet 192.168.72.49/24 metric 100 brd 192.168.72.255 scope global dynamic enp0s3
        valid_lft 307sec preferred_lft 307sec
    inet6 fe80::a00:27ff:fe7b:7afa/64 scope link dadfailed tentative
        valid_lft forever preferred_lft forever
3: ztnfacuriu: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 2800 qdisc fq_codel state UNKNOWN group default qlen 1000
    link/ether 1e:48:89:48:00:b1 brd ff:ff:ff:ff:ff:ff
    inet 172.29.247.62/16 brd 172.29.255.255 scope global ztnfacuriu
        valid_lft forever preferred_lft forever
    inet6 fe80::1c4d:89ff:fe48:b1/64 scope link
        valid_lft forever preferred_lft forever
hadoopuser@hadoop-namenode:~$

hadoopuser@hadoop-namenode:~$ ssh hadoopuser@192.168.72.49
hadoopuser@hadoop-namenode:~$
```

- c. Alamat IP : 192.168.72.49



```
hadoopuser@hadoop-namenode:~$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host noprefixroute
        valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 08:00:27:fb:7a:fa brd ff:ff:ff:ff:ff:ff
    inet 192.168.72.49/24 metric 100 brd 192.168.72.255 scope global dynamic enp0s3
        valid_lft 307sec preferred_lft 307sec
    inet6 fe80::a00:27ff:fe7b:7afa/64 scope link dadfailed tentative
        valid_lft forever preferred_lft forever
3: ztnfacuriu: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 2800 qdisc fq_codel state UNKNOWN group default qlen 1000
    link/ether 1e:48:89:48:00:b1 brd ff:ff:ff:ff:ff:ff
    inet 172.29.247.62/16 brd 172.29.255.255 scope global ztnfacuriu
        valid_lft forever preferred_lft forever
    inet6 fe80::1c4d:89ff:fe48:b1/64 scope link
        valid_lft forever preferred_lft forever
hadoopuser@hadoop-namenode:~$
```


d. Setting /etc/hosts

```
GNU nano 7.2 /etc/hosts
127.0.0.1 localhost

# The following lines are desirable for IPv6 capable hosts
::1 ip6-localhost ip6-loopback
fe00::0 ip6-localnet
ff00::0 ip6-mcastprefix
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters

# Hadoop cluster nodes
192.168.72.49 hadoop-namenode
192.168.72.209 hadoop-datanode1
192.168.72.173 hadoop-datanode2
192.168.72.93 hadoop-datanode3

[ Soft wrapping of overflow lines enabled ]
Help Write Out Where Is Cut Execute Location Undo Set Mark To Bracket Previous
Exit Read File Replace Paste Justify Go To Line Redo Copy Where Was Next
```

e. Membuat Folder pribadi

```
Last login: Tue Mar 18 06:52:39 2025 from 192.168.72.56
hadoopuser@hadoop-namenode:~$ ls
fs_kelompok3 kelompok4 profil-jti-polinema.mp4 snap
hadoopuser@hadoop-namenode:~$ cd Kelompok3
hadoopuser@hadoop-namenode:~/Kelompok3$ ls
07_FrankieSteinlie 09_M-Agung-Wibowo
hadoopuser@hadoop-namenode:~/Kelompok3$ cd 09_M-Agung-Wibowo
hadoopuser@hadoop-namenode:~/Kelompok3/09_M-Agung-Wibowo$ ls
info.txt
```

f. Membuat file txt

```
hadoopuser@hadoop-namenode:~/Kelompok3/09_M-Agung-Wibowo$ ls
info.txt
hadoopuser@hadoop-namenode:~/Kelompok3/09_M-Agung-Wibowo$ ls
info.txt
hadoopuser@hadoop-namenode:~/Kelompok3/09_M-Agung-Wibowo$ cat info.txt

Mata Kuliah : BIG DATA

Nama : M. Agung Wibowo
NIM : 244107027001
Kelas : TI RPL-4K
hadoopuser@hadoop-namenode:~/Kelompok3/09_M-Agung-Wibowo$
```