LAPORAN PRAKTIKUM

KUIS 1 MATA KULIAH "BIG DATA"

MEMBUAT DIREKTORI DAN FILE .TXT DI HADOOP

Dosen Pengampu:

VIPKAS AL HADID FIRDAUS, ST., MT.
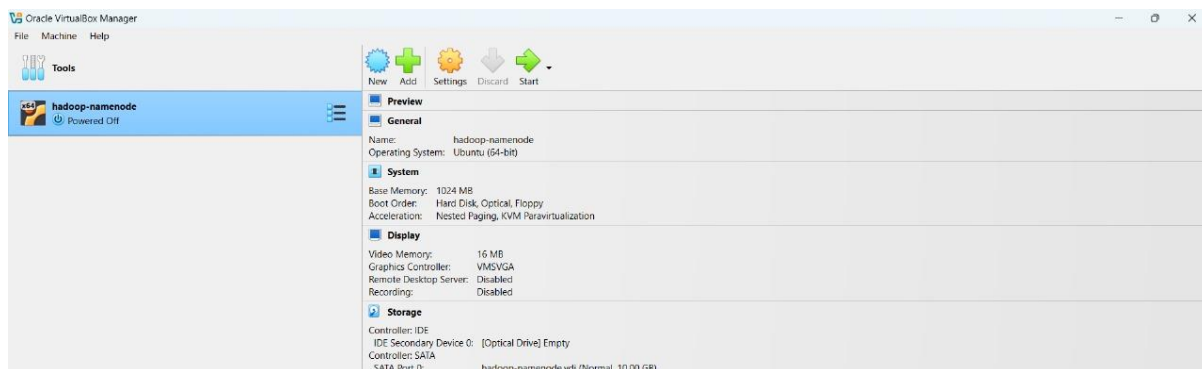

Disusun Oleh:

BIMA WISNUHANI	**(244107027016)**
M LATIFUR RAHMAN ALHAMIDA	**(244107027017)**
MOCHAMMAD ARDIANSYAH	**(244107027019)**
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PROGRAM STUDI D-IV TEKNIK INFORMATIKA
JURUSAN TEKNOLOGI INFORMASI
POLITEKNIK NEGERI MALANG
2024

Bima Wisnuhani	NameNode
Mochammad Ardiansyah	DataNode1
Rafio Sadani	DataNode2
M Latifur Rahman Alhamida	DataNode3

1. Bima Wisnuhani(NameNode)

a. Instalasi

b. Alamat IP 192.168.10.102

c. Setting /ets/hosts

d. start-dfs.sh

e. start-yarn.sh

```
Starting datanodes
Starting secondary namenodes [hadoop-namenode]
hadoopuser@hadoop-namenode:~$ start-yarn.sh
Starting resourcemanager
Starting nodemanagers
hadoopuser@hadoop-namenode:~$ jps
```

f. Terhubunglah ke cluster kelompok

```
hadoopuser@hadoop-namenode:~$ ping 192.168.10.101
PING 192.168.10.101 (192.168.10.101) 56(84) bytes of data.
64 bytes from 192.168.10.101: icmp_seq=1 ttl=64 time=60.2 ms
64 bytes from 192.168.10.101: icmp_seq=2 ttl=64 time=72.2 ms
64 bytes from 192.168.10.101: icmp_seq=3 ttl=64 time=22.0 ms
64 bytes from 192.168.10.101: icmp_seq=4 ttl=64 time=97.4 ms
64 bytes from 192.168.10.101: icmp_seq=5 ttl=64 time=44.3 ms
^C
--- 192.168.10.101 ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4005ms
rtt min/avg/max/mdev = 22.048/59.218/97.362/25.416 ms
hadoopuser@hadoop-namenode:~$ ping 192.168.10.108
PING 192.168.10.108 (192.168.10.108) 56(84) bytes of data.
64 bytes from 192.168.10.108: icmp_seq=1 ttl=64 time=18.1 ms
64 bytes from 192.168.10.108: icmp_seq=2 ttl=64 time=13.5 ms
64 bytes from 192.168.10.108: icmp_seq=3 ttl=64 time=280 ms
64 bytes from 192.168.10.108: icmp_seq=4 ttl=64 time=11.2 ms
64 bytes from 192.168.10.108: icmp_seq=5 ttl=64 time=10.2 ms
^C
--- 192.168.10.108 ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4004ms
rtt min/avg/max/mdev = 10.222/66.562/279.694/106.600 ms
hadoopuser@hadoop-namenode:~$ ping 192.168.10.103
PING 192.168.10.103 (192.168.10.103) 56(84) bytes of data.
64 bytes from 192.168.10.103: icmp_seq=1 ttl=64 time=191 ms
64 bytes from 192.168.10.103: icmp_seq=2 ttl=64 time=47.3 ms
64 bytes from 192.168.10.103: icmp_seq=3 ttl=64 time=102 ms
64 bytes from 192.168.10.103: icmp_seq=4 ttl=64 time=187 ms
64 bytes from 192.168.10.103: icmp_seq=5 ttl=64 time=359 ms
^C
--- 192.168.10.103 ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4005ms
rtt min/avg/max/mdev = 47.271/177.239/359.345/105.798 ms
hadoopuser@hadoop-namenode:~$ ping 192.168.10.102
PING 192.168.10.102 (192.168.10.102) 56(84) bytes of data.
64 bytes from 192.168.10.102: icmp_seq=1 ttl=64 time=0.020 ms
64 bytes from 192.168.10.102: icmp_seq=2 ttl=64 time=0.023 ms
64 bytes from 192.168.10.102: icmp_seq=3 ttl=64 time=0.023 ms
64 bytes from 192.168.10.102: icmp_seq=4 ttl=64 time=0.439 ms
64 bytes from 192.168.10.102: icmp_seq=5 ttl=64 time=0.022 ms
64 bytes from 192.168.10.102: icmp_seq=6 ttl=64 time=0.023 ms
^C
```

g. Buatlah sebuah direktori di cluster Hadoop kelompok Anda masing-masing

```
hadoopuser@hadoop-namenode:~$ jps
18356 Jps
17655 NameNode
18056 ResourceManager
17885 SecondaryNameNode
hadoopuser@hadoop-namenode:~$ hadoop fs -mkdir /04_BimaWisnuhani
hadoopuser@hadoop-namenode:~$ fs -ls /
Command 'fs' not found, but can be installed with:
sudo apt install openafs-client
hadoopuser@hadoop-namenode:~$ hadoop fs -ls /
Found 4 items
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:29 /04_BimaWisnuhani
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:28 /11_MochammadArdiansyah
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:29 /18_RafioSadani
drwxr-xr-x   - hadoopuser supergroup          0 2025-02-19 16:50 /yunhasnawa
hadoopuser@hadoop-namenode:~$ hadoop fs -ls /
Found 5 items
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:29 /04_BimaWisnuhani
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:32 /09_MLatifurRahman
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:28 /11_MochammadArdiansyah
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:29 /18_RafioSadani
drwxr-xr-x   - hadoopuser supergroup          0 2025-02-19 16:50 /yunhasnawa
hadoopuser@hadoop-namenode:~$ hadoop fs -ls /04_BimaWisnuhani
hadoopuser@hadoop-namenode:~$ hadoop fs -touchz /04_BimaWisnuhani
touchz: `/04_BimaWisnuhani': Is a directory
hadoopuser@hadoop-namenode:~$ hadoop fs -touchz /04_BimaWisnuhani/bimawisnuhani.txt
hadoopuser@hadoop-namenode:~$
```

h. Melihat direktori

```
hadoopuser@hadoop-namenode:~$ hadoop fs -ls /
Found 5 items
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:29 /04_BimaWisnuhani
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:32 /09_MLatifurRahman
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:28 /11_MochammadArdiansyah
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:29 /18_RafioSadani
drwxr-xr-x   - hadoopuser supergroup          0 2025-02-19 16:50 /yunhasnawa
hadoopuser@hadoop-namenode:~$ hadoop fs -ls /04_BimaWisnuhani
hadoopuser@hadoop-namenode:~$ hadoop fs -touchz /04_BimaWisnuhani
touchz: `/04_BimaWisnuhani': Is a directory
hadoopuser@hadoop-namenode:~$ hadoop fs -touchz /04_BimaWisnuhani/bimawisnuhani.txt
hadoopuser@hadoop-namenode:~$
```

i. Buat file txt

```
hadoopuser@hadoop-namenode:~$ hadoop fs -touchz /04_BimaWisnuhani/bimawisnuhani.txt
hadoopuser@hadoop-namenode:~$ echo -e "Nama : Bima Wisnuhani, NIM : 244107027016, Kelas : TI-4K, Jurusan : Teknik Informartika, Hobi : Fingerboard" | hadoop fs -appendToFile - "/04_BimaWisnuhani/bimawisnuhani.txt
> echo "Nama : Bima Wisnuhani, NIM : 244107027016, Kelas : TI-4K, Jurusan : Teknik Informartika, Hobi : Fingerboard" | hadoop fs -appendToFile - /04_BimaWisnuha
ni/bimawisnuhani.txt
> ^C
hadoopuser@hadoop-namenode:~$ echo "Nama : Bima Wisnuhani, NIM : 244107027016, Kelas : TI-4K, Jurusan : Teknik Informartika, Hobi : Fingerboard" | hadoop fs -ap
pendToFile - /04_BimaWisnuhani/bimawisnuhani.txt
hadoopuser@hadoop-namenode:~$ hadoop fs -cat /04_BimaWisnuhani/bimawisnuhani.txt
Nama : Bima Wisnuhani, NIM : 244107027016, Kelas : TI-4K, Jurusan : Teknik Informartika, Hobi : Fingerboard
hadoopuser@hadoop-namenode:~$
```

j. Unggahlah file TXT biasa yang berisi nama dan nomor absen Anda serta informasi

```
hadoopuser@hadoop-datanode2:~$ hadoop fs -ls /
Found 5 items
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:40 /04_BimaWisnuhani
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 16:19 /09_MLatifurRahman
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:59 /11_MochammadArdiansyah
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:39 /18_RafioSadani
drwxr-xr-x   - hadoopuser supergroup          0 2025-02-19 16:50 /yunhasnawa
hadoopuser@hadoop-datanode2:~$
hadoopuser@hadoop-datanode2:~$ hadoop fs -ls /04_BimaWisnuhani
Found 1 items
-rw-r--r--   3 hadoopuser supergroup        108 2025-03-19 16:08 /04_BimaWisnuhani/bimawisnuhani.txt
hadoopuser@hadoop-datanode2:~$
hadoopuser@hadoop-datanode2:~$ hadoop fs -cat /04_BimaWisnuhani/bimawisnuhani.txt
Nama : Bima Wisnuhani, NIM : 244107027016, Kelas : TI-4K, Jurusan : Teknik Informartika, Hobi : Fingerboard
hadoopuser@hadoop-datanode2:~$
```

2. Mochammad Ardiansyah(DataNode1)

a. Instalasi

b. Alamat IP 192.168.10.101

```
hadoopuser@hadoop-datanode1:~$ ip addr
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 100
0
    link/ether 08:00:27:91:4b:9a brd ff:ff:ff:ff:ff:ff
    inet 192.168.10.101/24 metric 100 brd 192.168.10.255 scope global dynamic enp0s3
       valid_lft 22177sec preferred_lft 22177sec
    inet6 fe80::a00:27ff:fe91:4b9a/64 scope link
       valid_lft forever preferred_lft forever
hadoopuser@hadoop-datanode1:~$
```

c. Setting /ets/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
192.168.10.102 hadoop-namenode
192.168.10.101 hadoop-datanode1
192.168.2.108 hadoop-datanode2
192.168.10.103 hadoop-datanode3
```

d. Terhubunglah ke cluster kelompok

```
hadoopuser@hadoop-datanode1:~$ ping 192.168.10.108
PING 192.168.10.108 (192.168.10.108) 56(84) bytes of data.
64 bytes from 192.168.10.108: icmp_seq=1 ttl=64 time=36.4 ms
64 bytes from 192.168.10.108: icmp_seq=2 ttl=64 time=50.7 ms
64 bytes from 192.168.10.108: icmp_seq=3 ttl=64 time=52.2 ms
64 bytes from 192.168.10.108: icmp_seq=4 ttl=64 time=95.7 ms
64 bytes from 192.168.10.108: icmp_seq=5 ttl=64 time=90.0 ms
64 bytes from 192.168.10.108: icmp_seq=6 ttl=64 time=38.3 ms
hadoopuser@hadoop-datanode1:~$ ping 192.168.10.103
PING 192.168.10.103 (192.168.10.103) 56(84) bytes of data.
64 bytes from 192.168.10.103: icmp_seq=1 ttl=64 time=215 ms
64 bytes from 192.168.10.103: icmp_seq=2 ttl=64 time=135 ms
64 bytes from 192.168.10.103: icmp_seq=3 ttl=64 time=84.9 ms
64 bytes from 192.168.10.103: icmp_seq=4 ttl=64 time=182 ms
64 bytes from 192.168.10.103: icmp_seq=5 ttl=64 time=48.8 ms
64 bytes from 192.168.10.103: icmp_seq=6 ttl=64 time=75.4 ms
64 bytes from 192.168.10.103: icmp_seq=7 ttl=64 time=130 ms
64 bytes from 192.168.10.103: icmp_seq=8 ttl=64 time=125 ms
64 bytes from 192.168.10.103: icmp_seq=9 ttl=64 time=135 ms
64 bytes from 192.168.10.103: icmp_seq=10 ttl=64 time=72.8 ms
64 bytes from 192.168.10.103: icmp_seq=11 ttl=64 time=75.3 ms
64 bytes from 192.168.10.103: icmp_seq=12 ttl=64 time=88.2 ms
64 bytes from 192.168.10.103: icmp_seq=13 ttl=64 time=192 ms
hadoopuser@hadoop-datanode1:~$ ping 192.168.10.102
PING 192.168.10.102 (192.168.10.102) 56(84) bytes of data.
64 bytes from 192.168.10.102: icmp_seq=1 ttl=64 time=122 ms
64 bytes from 192.168.10.102: icmp_seq=2 ttl=64 time=124 ms
64 bytes from 192.168.10.102: icmp_seq=3 ttl=64 time=67.7 ms
64 bytes from 192.168.10.102: icmp_seq=4 ttl=64 time=212 ms
64 bytes from 192.168.10.102: icmp_seq=5 ttl=64 time=134 ms
64 bytes from 192.168.10.102: icmp_seq=6 ttl=64 time=183 ms
64 bytes from 192.168.10.102: icmp_seq=7 ttl=64 time=61.6 ms
64 bytes from 192.168.10.102: icmp_seq=8 ttl=64 time=94.2 ms
64 bytes from 192.168.10.102: icmp_seq=9 ttl=64 time=52.7 ms
64 bytes from 192.168.10.102: icmp_seq=10 ttl=64 time=42.7 ms
64 bytes from 192.168.10.102: icmp_seq=11 ttl=64 time=241 ms
```

e. Buatlah sebuah direktori di cluster Hadoop kelompok Anda masing-masing

```
hadoopuser@hadoop-datanode1:~$ hadoop fs -mkdir /11_MochammadArdiansyah
hadoopuser@hadoop-datanode1:~$ hadoop fs -ls /
```

f. Melihat direktori

```
hadoopuser@hadoop-datanode1:~$ hadoop fs -ls /
Found 4 items
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:29 /09_Mlatifur
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:28 /11_MochammadArdiansyah
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:29 /18_RafioSadani
drwxr-xr-x   - hadoopuser supergroup          0 2025-02-19 16:50 /yunhasnawa
hadoopuser@hadoop-datanode1:~$ hadoop fs -ls /
Found 5 items
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:29 /04_BimaWisnuhani
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:29 /09_Mlatifur
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:28 /11_MochammadArdiansyah
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:29 /18_RafioSadani
drwxr-xr-x   - hadoopuser supergroup          0 2025-02-19 16:50 /yunhasnawa
hadoopuser@hadoop-datanode1:~$ _
```

g. Buat file txt

```
hadoopuser@hadoop-datanode1:~$ hadoop fs -touchz /11_MochammadArdiansyah/mchardians.txt
hadoopuser@hadoop-datanode1:~$ _
```

h. Mengisi file txt

```
hadoopuser@hadoop-datanode1:~$ echo "Nama: Mochammad Ardiansyah, NIM: 244107027019, Kelas: TI-4K, Ju
rusan: Teknologi Informasi, Hobi: Bermain Game Monster Hunter" | hadoop fs -appendToFile - /11_Mocha
mmadArdiansyah/mchardians.txt
hadoopuser@hadoop-datanode1:~$
```

i. Unggahlah file TXT biasa yang berisi nama dan nomor absen Anda serta informasi

```
hadoopuser@hadoop-datanode2:~$ hadoop fs -ls /
Found 5 items
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:40 /04_BimaWisnuhani
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 16:19 /09_MLatifurRahman
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:59 /11_MochammadArdiansyah
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:39 /18_RafioSadani
drwxr-xr-x   - hadoopuser supergroup          0 2025-02-19 16:50 /yunhasnawa
hadoopuser@hadoop-datanode2:~$
hadoopuser@hadoop-datanode2:~$ hadoop fs -ls /11_MochammadArdiansyah
Found 1 items
-rw-r--r--   3 hadoopuser supergroup        125 2025-03-19 16:03 /11_MochammadArdiansyah/mchardians.txt
hadoopuser@hadoop-datanode2:~$
hadoopuser@hadoop-datanode2:~$ hadoop fs -cat /11_MochammadArdiansyah/mchardians.txt
Nama: Mochammad Ardiansyah, NIM: 244107027019, Kelas: TI-4K, Jurusan: Teknologi Informasi, Hobi: Bermain Game Monster Hunter
hadoopuser@hadoop-datanode2:~$ _
```

3. Rafio Sadani(DataNode2)

a. Instalasi

b. Alamat IP 192.168.10.108

```
hadoopuser@hadoop-datanode2:~$ ip addr
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:c9:55:36 brd ff:ff:ff:ff:ff:ff
    inet 192.168.10.108/24 metric 100 brd 192.168.10.255 scope global dynamic enp0s3
       valid_lft 13949sec preferred_lft 13949sec
    inet6 fe80::a00:27ff:fec9:5536/64 scope link
       valid_lft forever preferred_lft forever
hadoopuser@hadoop-datanode2:~$ _
```

c. Setting /ets/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
192.168.10.102 hadoop-namenode
192.168.10.101 hadoop-datanode1
192.168.10.108 hadoop-datanode2
192.168.10.103 hadoop-datanode3
```

d. Terhubunglah ke cluster kelompok

```
hadoopuser@hadoop-datanode2:~$ ping 192.168.10.101
PING 192.168.10.101 (192.168.10.101) 56(84) bytes of data.
64 bytes from 192.168.10.101: icmp_seq=1 ttl=64 time=96.2 ms
64 bytes from 192.168.10.101: icmp_seq=2 ttl=64 time=171 ms
64 bytes from 192.168.10.101: icmp_seq=3 ttl=64 time=148 ms
64 bytes from 192.168.10.101: icmp_seq=4 ttl=64 time=12.9 ms
^C
--- 192.168.10.101 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3003ms
rtt min/avg/max/mdev = 12.898/107.010/170.615/60.671 ms
```

```
hadoopuser@hadoop-datanode2:~$ ping 192.168.10.102
PING 192.168.10.102 (192.168.10.102) 56(84) bytes of data.
64 bytes from 192.168.10.102: icmp_seq=1 ttl=64 time=31.4 ms
64 bytes from 192.168.10.102: icmp_seq=2 ttl=64 time=16.2 ms
64 bytes from 192.168.10.102: icmp_seq=3 ttl=64 time=14.4 ms
64 bytes from 192.168.10.102: icmp_seq=4 ttl=64 time=34.4 ms
^C
--- 192.168.10.102 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3003ms
rtt min/avg/max/mdev = 14.359/24.082/34.376/8.901 ms
```

```
hadoopuser@hadoop-datanode2:~$ ping 192.168.10.103
PING 192.168.10.103 (192.168.10.103) 56(84) bytes of data.
64 bytes from 192.168.10.103: icmp_seq=1 ttl=64 time=55.9 ms
64 bytes from 192.168.10.103: icmp_seq=2 ttl=64 time=45.2 ms
64 bytes from 192.168.10.103: icmp_seq=3 ttl=64 time=81.8 ms
64 bytes from 192.168.10.103: icmp_seq=4 ttl=64 time=81.7 ms
^C
--- 192.168.10.103 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3003ms
rtt min/avg/max/mdev = 45.196/66.150/81.843/16.062 ms
```

e. Buatlah sebuah direktori di cluster Hadoop kelompok Anda masing-masing

```
hadoopuser@hadoop-datanode2:~$ hadoop fs -mkdir /18_RafioSadani
hadoopuser@hadoop-datanode2:~$ hadoop fs -ls /
Found 5 items
```

f. Melihat direktori

```
hadoopuser@hadoop-datanode2:~$ hadoop fs -ls /
Found 5 items
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:29 /04_BimaWisnuhani
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:32 /09_MLatifurRahman
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:28 /11_MochammadArdiansyah
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:29 /18_RafioSadani
drwxr-xr-x   - hadoopuser supergroup          0 2025-02-19 16:50 /yunhasnawa
hadoopuser@hadoop-datanode2:~$ hadoop fs -ls /18_RafioSadani
```

g. Buat file txt

```
hadoopuser@hadoop-datanode2:~$ hadoop fs -ls /18_RafioSadani
hadoopuser@hadoop-datanode2:~$ hadoop fs -touchz /18_RafioSadani/rafiosadani.txt
hadoopuser@hadoop-datanode2:~$ echo -e "Nama: Rafio Sadani, NIM: 244107027004, Kelas: TI-4K, Jurusan: D4 Teknik Informatika, Hobi: Main Game Mobile Legends" | h
adoop fs -appendToFile - /18_RafioSadani/rafiosadani.txt
hadoopuser@hadoop-datanode2:~$ hadoop fs -cat /18_RafioSadani/rafiosadani.txt
Nama: Rafio Sadani, NIM: 244107027004, Kelas: TI-4K, Jurusan: D4 Teknik Informatika, Hobi: Main Game Mobile Legends
hadoopuser@hadoop-datanode2:~$ _
```
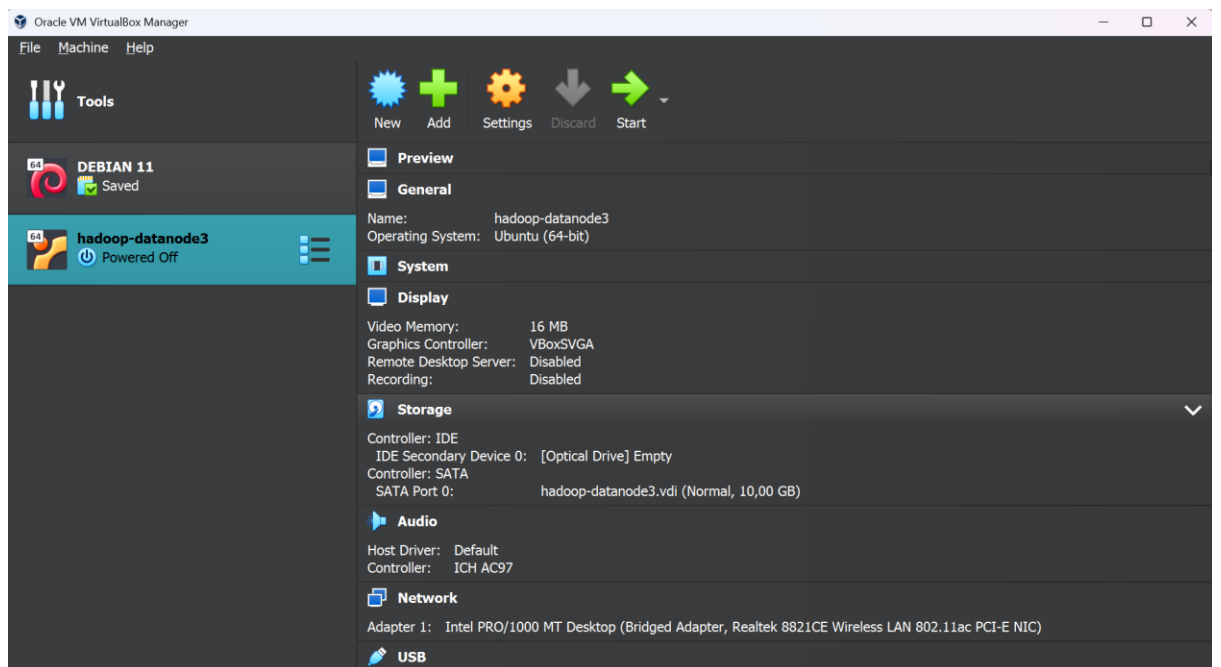
h. Mengisi file txt

```
hadoopuser@hadoop-datanode2:~$ hadoop fs -ls /18_RafioSadani
hadoopuser@hadoop-datanode2:~$ hadoop fs -touchz /18_RafioSadani/rafiosadani.txt
hadoopuser@hadoop-datanode2:~$ echo -e "Nama: Rafio Sadani, NIM: 244107027004, Kelas: TI-4K, Jurusan: D4 Teknik Informatika, Hobi: Main Game Mobile Legends" | h
adoop fs -appendToFile - /18_RafioSadani/rafiosadani.txt
hadoopuser@hadoop-datanode2:~$ hadoop fs -cat /18_RafioSadani/rafiosadani.txt
Nama: Rafio Sadani, NIM: 244107027004, Kelas: TI-4K, Jurusan: D4 Teknik Informatika, Hobi: Main Game Mobile Legends
hadoopuser@hadoop-datanode2:~$ _
```

i. Unggahlah file TXT biasa yang berisi nama dan nomor absen Anda serta informasi

```
hadoopuser@hadoop-datanode2:~$ hadoop fs -ls /
Found 5 items
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:40 /04_BimaWisnuhani
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 16:19 /09_MLatifurRahman
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:59 /11_MochammadArdiansyah
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:39 /18_RafioSadani
drwxr-xr-x   - hadoopuser supergroup          0 2025-02-19 16:50 /yunhasnawa
hadoopuser@hadoop-datanode2:~$
hadoopuser@hadoop-datanode2:~$ hadoop fs -ls /18_RafioSadani
Found 1 items
-rw-r--r--   3 hadoopuser supergroup        116 2025-03-19 15:57 /18_RafioSadani/rafiosadani.txt
hadoopuser@hadoop-datanode2:~$
hadoopuser@hadoop-datanode2:~$ hadoop fs -cat /18_RafioSadani/rafiosadani.txt
Nama: Rafio Sadani, NIM: 244107027004, Kelas: TI-4K, Jurusan: D4 Teknik Informatika, Hobi: Main Game Mobile Legends
hadoopuser@hadoop-datanode2:~$
```

4. M Latifur Rahman Alhamida(DataNode3)

a. Instalasi

b. Alamat IP 192.168.10.103

```
hadoopuser@hadoop-datanode3:~$ ip addr
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 100
0
    link/ether 08:00:27:a6:58:94 brd ff:ff:ff:ff:ff:ff
    inet 192.168.10.103/24 metric 100 brd 192.168.10.255 scope global dynamic enp0s3
       valid_lft 21047sec preferred_lft 21047sec
    inet6 fe80::a00:27ff:fea6:5894/64 scope link
       valid_lft forever preferred_lft forever
hadoopuser@hadoop-datanode3:~$ _
```

c. Setting /ets/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
192.168.10.102 hadoop-namenode
192.168.10.101 hadoop-datanode1
192.168.10.108 hadoop-datanode2
192.168.10.103 hadoop-datanode3
```

d. Terhubunglah ke cluster kelompok

```
^Z
[1]+ Stopped                 ping 192.168.10.101
hadoopuser@hadoop-datanode3:~$ ping 192.168.10.102
PING 192.168.10.102 (192.168.10.102) 56(84) bytes of data.
64 bytes from 192.168.10.102: icmp_seq=1 ttl=64 time=364 ms
64 bytes from 192.168.10.102: icmp_seq=2 ttl=64 time=55.6 ms
64 bytes from 192.168.10.102: icmp_seq=3 ttl=64 time=155 ms
64 bytes from 192.168.10.102: icmp_seq=4 ttl=64 time=107 ms
64 bytes from 192.168.10.102: icmp_seq=5 ttl=64 time=114 ms
64 bytes from 192.168.10.102: icmp_seq=6 ttl=64 time=43.0 ms
64 bytes from 192.168.10.102: icmp_seq=7 ttl=64 time=55.5 ms
64 bytes from 192.168.10.102: icmp_seq=8 ttl=64 time=121 ms
64 bytes from 192.168.10.102: icmp_seq=9 ttl=64 time=50.5 ms
64 bytes from 192.168.10.102: icmp_seq=10 ttl=64 time=43.4 ms
64 bytes from 192.168.10.102: icmp_seq=11 ttl=64 time=135 ms
64 bytes from 192.168.10.102: icmp_seq=12 ttl=64 time=34.8 ms
64 bytes from 192.168.10.102: icmp_seq=13 ttl=64 time=22.6 ms
64 bytes from 192.168.10.102: icmp_seq=14 ttl=64 time=26.4 ms
^Z
[2]+ Stopped                 ping 192.168.10.102
hadoopuser@hadoop-datanode3:~$ ping 192.168.10.108
PING 192.168.10.108 (192.168.10.108) 56(84) bytes of data.
64 bytes from 192.168.10.108: icmp_seq=1 ttl=64 time=780 ms
64 bytes from 192.168.10.108: icmp_seq=2 ttl=64 time=91.0 ms
64 bytes from 192.168.10.108: icmp_seq=3 ttl=64 time=10.8 ms
64 bytes from 192.168.10.108: icmp_seq=4 ttl=64 time=7.87 ms
64 bytes from 192.168.10.108: icmp_seq=5 ttl=64 time=9.07 ms
64 bytes from 192.168.10.108: icmp_seq=6 ttl=64 time=7.39 ms
64 bytes from 192.168.10.108: icmp_seq=7 ttl=64 time=7.84 ms
64 bytes from 192.168.10.108: icmp_seq=8 ttl=64 time=10.5 ms
64 bytes from 192.168.10.108: icmp_seq=9 ttl=64 time=17.7 ms
64 bytes from 192.168.10.108: icmp_seq=10 ttl=64 time=8.59 ms
64 bytes from 192.168.10.108: icmp_seq=11 ttl=64 time=9.62 ms
64 bytes from 192.168.10.108: icmp_seq=12 ttl=64 time=39.4 ms
64 bytes from 192.168.10.108: icmp_seq=13 ttl=64 time=133 ms
64 bytes from 192.168.10.108: icmp_seq=14 ttl=64 time=22.2 ms
64 bytes from 192.168.10.108: icmp_seq=15 ttl=64 time=5.60 ms
64 bytes from 192.168.10.108: icmp_seq=16 ttl=64 time=17.6 ms
64 bytes from 192.168.10.108: icmp_seq=17 ttl=64 time=11.9 ms
64 bytes from 192.168.10.108: icmp_seq=18 ttl=64 time=29.1 ms
64 bytes from 192.168.10.108: icmp_seq=19 ttl=64 time=16.0 ms
^Z
[3]+ Stopped                 ping 192.168.10.108
hadoopuser@hadoop-datanode3:~$
```

e. Buatlah sebuah direktori di cluster Hadoop kelompok Anda masing-masing

```
The list of available updates is more than a week old.
To check for new updates run: sudo apt update

hadoopuser@hadoop-datanode3:~$ hadoop fs -mkdir /08_MLatifurRahman
```

f. Melihat direktori

```
Found 5 items
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:29 /04_BimaWisnuhani
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:32 /09_MLatifurRahman
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:28 /11_MochammadArdiansyah
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:29 /18_RafioSadani
drwxr-xr-x   - hadoopuser supergroup          0 2025-02-19 16:50 /yunhasnawa
hadoopuser@hadoop-datanode2:~$ hadoop fs -ls /18_RafioSadani
```

g. Unggahlah file TXT biasa yang berisi nama dan nomor absen Anda serta informasi

```
hadoopuser@hadoop-datanode2:~$ hadoop fs -ls /
Found 5 items
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:40 /04_BimaWisnuhani
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 16:19 /09_MLatifurRahman
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:59 /11_MochammadArdiansyah
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-19 15:39 /18_RafioSadani
drwxr-xr-x   - hadoopuser supergroup          0 2025-02-19 16:50 /yunhasnawa
hadoopuser@hadoop-datanode2:~$
hadoopuser@hadoop-datanode2:~$ hadoop fs -ls /09_MLatifurRahman
Found 1 items
-rw-r--r--   3 hadoopuser supergroup         76 2025-03-19 16:24 /09_MLatifurRahman/latifurrahmanalhamida.txt
hadoopuser@hadoop-datanode2:~$
hadoopuser@hadoop-datanode2:~$ hadoop fs -cat /09_MLatifurRahman/latifurrahmanalhamida.txt
Nama: M Latifur Rahman, Nim: 244107027017, Kelas: TI 4K, Citacita: presiden
hadoopuser@hadoop-datanode2:~$
```