Nama  : **Fitria Nur Sholikah**

Kelas   : **SIB-3E**

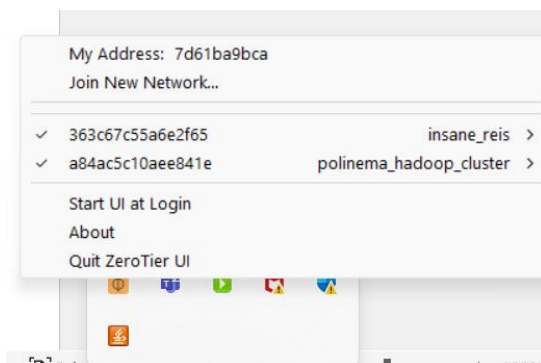NIM     : **2241760004**

Matkul: **BIG DATA**

# Jobsheet 1

## Infrastruktur Big Data Bagian-1 (HDFS)

a. **Konfigurasi VPN Client**
   - Bergabung ke Jaringan VPN (dari OS Windows)
     • Klik "Join New Network".
     • Masukkan network ID yang sudah dijelaskan sebelumnya.



   - Install VPN Client
   • Untuk menguji apakah Anda sudah terhubung dengan jaringan VPN cluster Hadoop ini, bukalah CMD atauterminal di computer Anda. Lalu ping IP berikut:

**Ping 172.29.253.67**



b. **Mengakses Cluster Hadoop**
   - Menghubungkan dengan name node melaluiSSH.
   • Jika Anda di macOS/Linux:
   • Buka terminal dan ketikkan perintah: ssh hadoopuser@172.29.253.67

•Masukkan password: hadoop

```
PS C:\Users\user> ssh hadoopuser@172.29.247.62
hadoopuser@172.29.247.62's password:
Welcome to Ubuntu 24.04.2 LTS (GNU/Linux 6.8.0-54-generic x86_64)

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

 System information as of Tue Mar 11 04:38:58 AM UTC 2025

  System load:  0.38               Processes:             154
  Usage of /:   76.0% of 9.74GB    Users logged in:       1
  Memory usage: 47%                IPv4 address for enp0s3: 192.168.2.203
  Swap usage:   0%


Expanded Security Maintenance for Applications is not enabled.

26 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status


*** System restart required ***
Last login: Tue Mar 11 04:35:57 2025 from 172.29.166.217
hadoopuser@hadoop-namenode:~$ jps
```

- Cek Status Name Node

• Ketikkan perintah "jps".

• Akan ditampilkan status mesin saat ini yang bertugas sebagai name node.

```
hadoopuser@hadoop-namenode:~$ jps
1699 SecondaryNameNode
1878 ResourceManager
38041 Jps
1455 NameNode
```

- Melihat Status Data Nodes

• Anda dapat melihat status data nodes saat ini melalui GUI Web yang dapat diakses melalui alamat: **http:// :9870/dfshealth.html**

• Klik menu Data nodes untuk melihat informasi data node yang ada pada cluster.



- MelihatStatus Pemrosesan MapReduce

• Situs yang sebelumnya terkait dengan penyimpanan data (HDFS) untuk pemrosesan, adaGUI Web yang lain. Anda dapat mengaksesnya melalui browser Anda dengan mengetikkan alamat:

• **http://:8088/cluster**

## c. Sedikit Perintah Dasar

- Melihat Versi Hadoop

**Ketikkan:**

**• hadoopversion**

```
hadoopuser@hadoop-namenode:~$ hadoop version
Hadoop 3.4.1
Source code repository https://github.com/apache/hadoop.git -r 4d7825309348956336b
8f06a08322b78422849b1
Compiled by mthakur on 2024-10-09T14:57Z
Compiled on platform linux-x86_64
Compiled with protoc 3.23.4
From source with checksum 7292fe9dba5e2e44e3a9f763fce3e680
This command was run using /usr/local/hadoop/share/hadoop/common/hadoop-common-3.4
.1.jar
```

- MembuatFolder

**Ketikkan:**

**• hadoopfs –mkdir /**

```
hadoopuser@hadoop-namenode:~$ hadoop fs -mkdir /09_FitriaNurSholikah
```

- Melihat Folder - folder yang Ada

**Ketikkan:**

**• hadoop fs –ls/**

```
hadoopuser@hadoop-namenode:~$ hadoop fs -ls /
Found 44 items
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-11 04:50 /03_AgtaFadjrinAminullah
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-11 04:38 /04_AgungNugroho
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-11 04:38 /05_Albani
drwxr-xr-x   - hadoopuser supergroup          0 2025-02-25 07:33 /05_FebbyMathelda
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-07 16:30 /07_HafizhMuhammadRabbani
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-08 14:24 /08_HilmiIrfanN
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-11 04:53 /09_FitriaNurSholikah
drwxr-xr-x   - hadoopuser supergroup          0 2025-02-28 10:25 /09_MayaMelanesia
drwxr-xr-x   - hadoopuser supergroup          0 2025-02-25 08:04 /10_MochammadZakaroAlFajri
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-11 04:41 /11_hilmy
drwxr-xr-x   - hadoopuser supergroup          0 2025-03-07 19:10 /11_muhammadiqbalmuhtaram
drwxr-xr-x   - hadoopuser supergroup          0 2025-02-25 08:58 /12_MuhammadIrsyadDany
drwxr-xr-x   - hadoopuser supergroup          0 2025-02-27 01:59 /13_Fifi
drwxr-xr-x   - hadoopuser supergroup          0 2025-02-26 03:32 /13_Hanief
```