

Agta Fadjrin Aminullah

SIB 3E / 03

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JOBSHEET 1

1. Menghubungkan ke cluster Hadoop

```
Minimum = 13ms, Maximum = 191ms, Average = 117ms
PS C:\Users\hp> ssh hadoopuser@172.29.247.62
The authenticity of host '172.29.247.62 (172.29.247.62)' can't be established.
ED25519 key fingerprint is SHA256:BjHvtsH6B+jEGxXCmJKyg4N7pbcsIvsSS+Eih0qkHOE.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '172.29.247.62' (ED25519) to the list of known hosts.
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 04:31:40 AM UTC 2025

System load:  0.0      Processes:    139
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

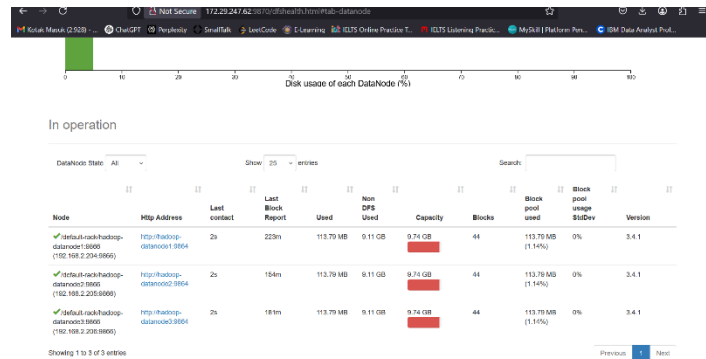
Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

*** System restart required ***
Last login: Tue Mar 11 04:31:41 2025 from 172.29.235.33
hadoopuser@hadoop-namenode:~$ jps
36992 Jps
1699 SecondaryNameNode
1878 ResourceManager
```

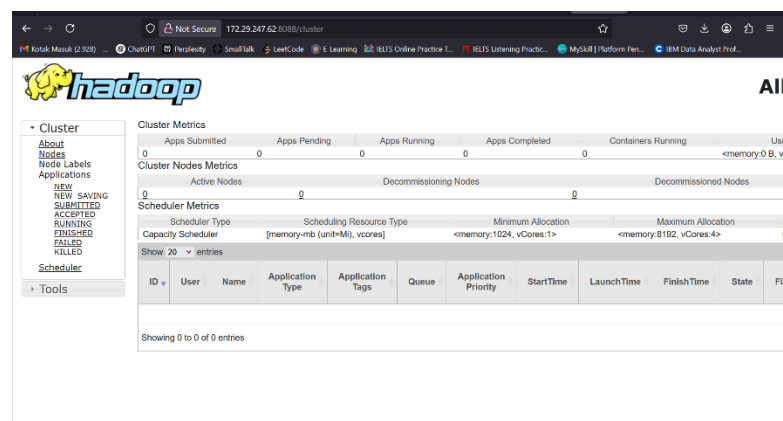
Ketika komputer sudah terhubung dengan VPN Cluster Hadoop, maka bisa mencoba untuk terhubung dengan name node melalui SSH. Mengakses suatu cluster Hadoop perlu terhubung dengan name node. Ketikan perintah 'ssh hadoopuser@172.29.247.62' pada powershell, seperti pada gambar di atas.

```
hadoopuser@hadoop-namenode:~$ jps
36992 Jps
1699 SecondaryNameNode
1878 ResourceManager
1455 NameNode
hadoopuser@hadoop-namenode:~$ jps
1699 SecondaryNameNode
1878 ResourceManager
37864 Jps
1455 NameNode
hadoopuser@hadoop-namenode:~$
```

Jika berhasil terhubung maka prompt pada terminal hadoopuser@hadoop-namenode. Cek Status Name Node menggunakan perintah 'jps'. Hasilnya akan tampil seperti pada gambar di atas.



Melihat Status Data Nodes, yang dapat diakses melalui alamat <http://172.29.247.62:9870/dfshealth.html#tab-datanode> dan langsung masuk ke dalam menu 'DataNode'



Melihat pemrosesan MapReduce dengan alamat: <http://172.29.247.62:8088/cluster>

2. Menjalankan 3 perintah dasar:

Melihat versi Hadoop dengan perintah 'hadoop version'

```
*** System restart required ***
Last login: Tue Mar 11 04:31:41 2025 from 172.29.235.33
hadoopuser@hadoop-namenode:~$ jps
36992 Jps
1699 SecondaryNameNode
1878 ResourceManager
1455 NameNode
hadoopuser@hadoop-namenode:~$ jps
36992 Jps
1699 SecondaryNameNode
1878 ResourceManager
37864 Jps
1455 NameNode
hadoopuser@hadoop-namenode:~$ hadoop version
Hadoop 3.4.1
Source code repository https://github.com/apache/hadoop.git -r 4d7825389348956336b8f06a88322b78422849b1
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
hadoopuser@hadoop-namenode:~$
```

Pembuatan file sesuai nama dengan perintah: 'hadoop fs -mkdir /03_AgtaFadJrinAminullah'

```
hadoopuser@hadoop-namenode:~$ hadoop fs -mkdir /03_AgtaFadJrinAminullah
hadoopuser@hadoop-namenode:~$ hadoop fs -ls /
Found 45 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_Al bani
drwxr-xr-x - hadoopuser supergroup 0 2025-03-11 04:38 /05_FahmyMutholib
```

Melihat folder yang ada dengan perintah 'hadoop fs -ls/'

```

hadoopuser@hadoop-namenode:~$ hadoop fs -ls /
Found 45 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_Al bani
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 2025-02-28 10:25 /09_MayaMelanesia
drwxr-xr-x - hadoopuser supergroup 0 2025-02-25 08:04 /10_MohammadZakaroAlFajri
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
drwxr-xr-x - hadoopuser supergroup 0 2025-02-26 03:33 /13_HaniefMochsin
drwxr-xr-x - hadoopuser supergroup 0 2025-02-25 08:58 /14NurhalizaAnindyaPutri
drwxr-xr-x - hadoopuser supergroup 0 2025-02-25 08:56 /15_RhanilhamFadlillatulRamadhan
drwxr-xr-x - hadoopuser supergroup 0 2025-02-26 08:05 /18_MulkiHakim
drwxr-xr-x - hadoopuser supergroup 0 2025-02-25 07:53 /18_ShasiaSasaSalsabya
drwxr-xr-x - hadoopuser supergroup 0 2025-02-26 07:44 /19_Rendy
drwxr-xr-x - hadoopuser supergroup 0 2025-03-01 09:04 /20_SukmaBagusWahasdika
drwxr-xr-x - hadoopuser supergroup 0 2025-02-25 07:40 /21_TriyanaDewiFatmawati
drwxr-xr-x - hadoopuser supergroup 0 2025-03-11 04:37 /AgungNugroho
drwxr-xr-x - hadoopuser supergroup 0 2025-03-10 09:12 /BimoCahyoKusumo_4K-RPL
drwxr-xr-x - hadoopuser supergroup 0 2025-03-08 14:19 /EkaKrisnaFeran
drwxr-xr-x - hadoopuser supergroup 0 2025-03-02 20:30 /EntFladda
drwxr-xr-x - hadoopuser supergroup 0 2025-03-11 04:42 /FikriSetiawan
drwxr-xr-x - hadoopuser supergroup 0 2025-03-10 09:10 /Frankie-Steinlie_4K-RPL

```

3. Pembuatan File di kelas SIB-3E dan melakukan pengecekan

```

hadoopuser@hadoop-namenode:~$ hadoop fs -mkdir /SIB-3E/03_AgtaFadJrinAminullah
hadoopuser@hadoop-namenode:~$ hadoop fs -ls /
Found 44 items
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_Al bani
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 2025-02-28 10:25 /09_MayaMelanesia
drwxr-xr-x - hadoopuser supergroup 0 2025-02-25 08:04 /10_MohammadZakaroAlFajri
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
drwxr-xr-x - hadoopuser supergroup 0 2025-02-26 03:33 /13_HaniefMochsin
drwxr-xr-x - hadoopuser supergroup 0 2025-02-25 08:58 /14NurhalizaAnindyaPutri
drwxr-xr-x - hadoopuser supergroup 0 2025-02-25 08:56 /15_RhanilhamFadlillatulRamadhan
drwxr-xr-x - hadoopuser supergroup 0 2025-02-26 08:05 /18_MulkiHakim

```