

Big Data

Kuis Big Data (Week 4)

Dosen :

M. Hasyim Ratsanjani, S.Kom., M.Kom.



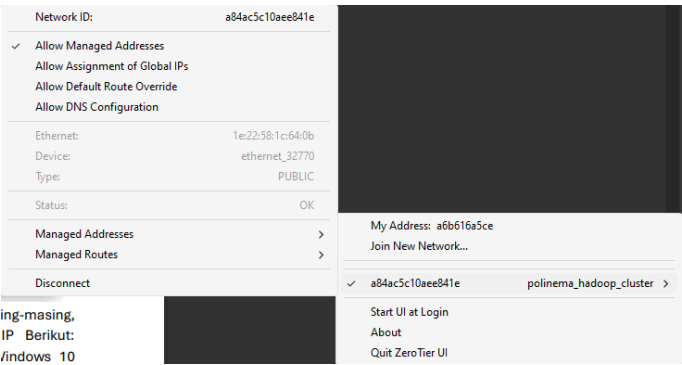
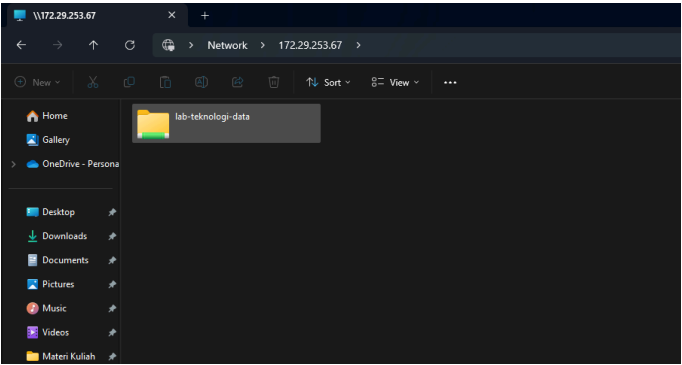

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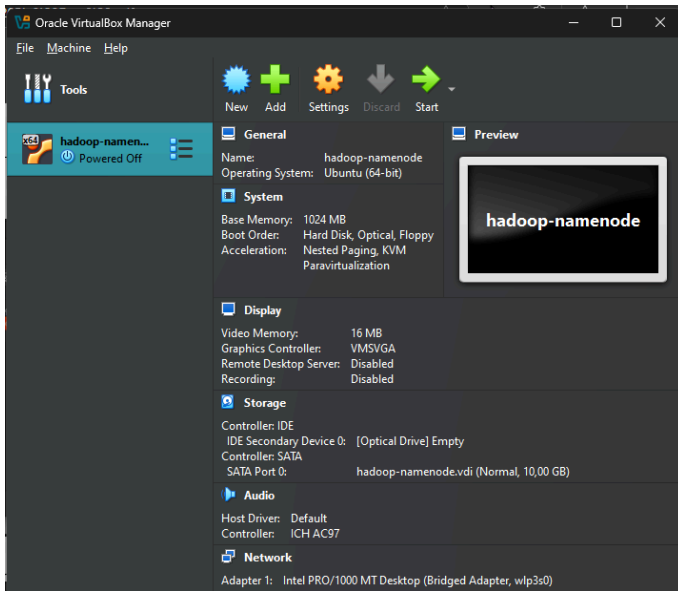
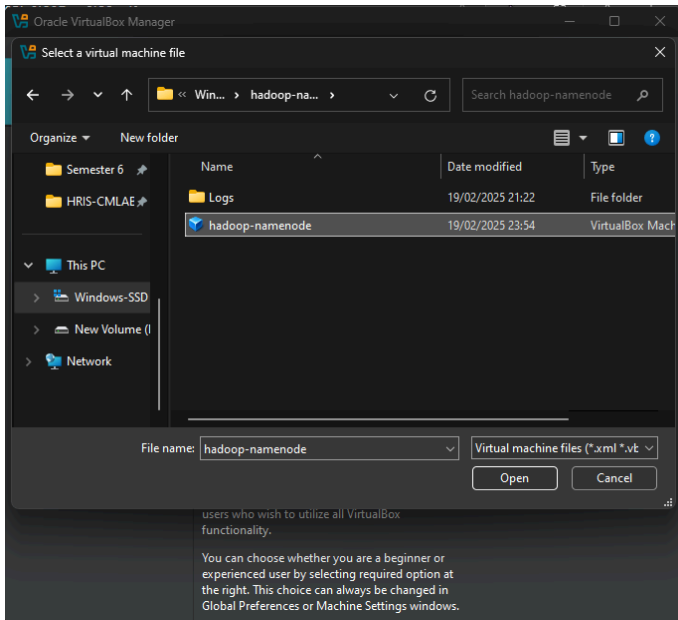
Dika Dwi Alamsyah	2241720129
Febiola Lidya Sianturi	2241720229
Nurhaliza Anindya Putri	2241720016
Septa Puma Surya	2241720119

Kelas : TI – 3D

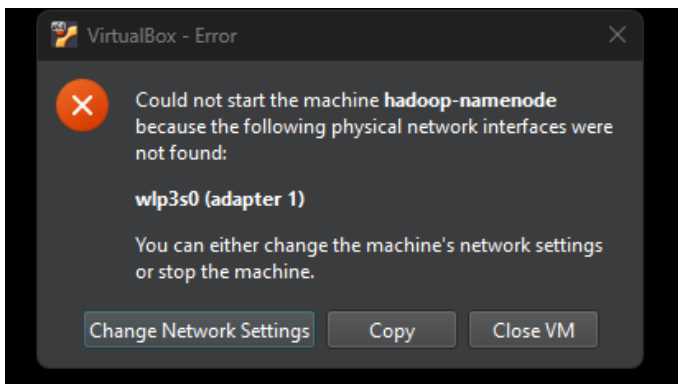
POLITEKNIK NEGERI MALANG

2025

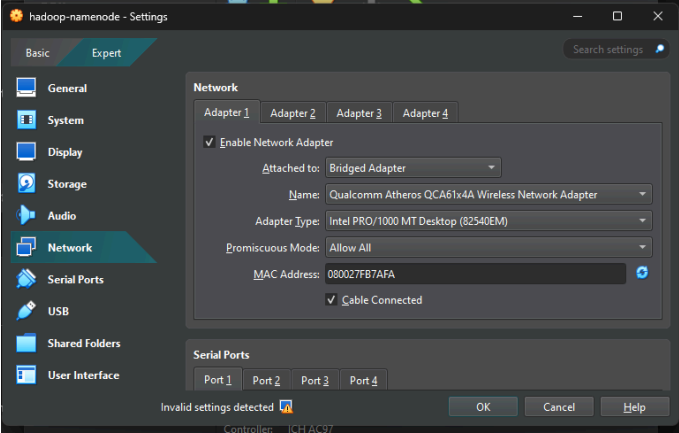
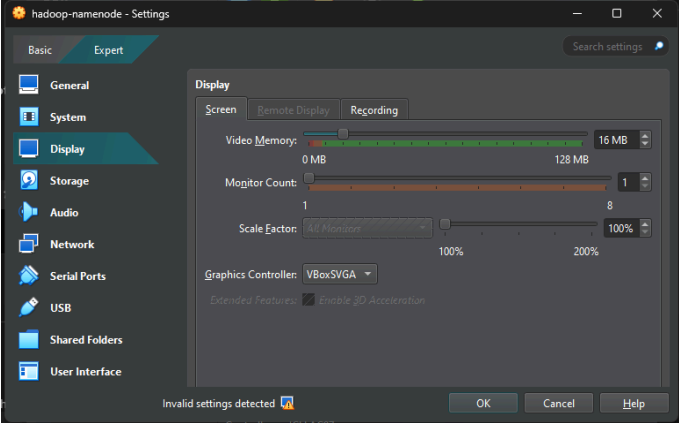
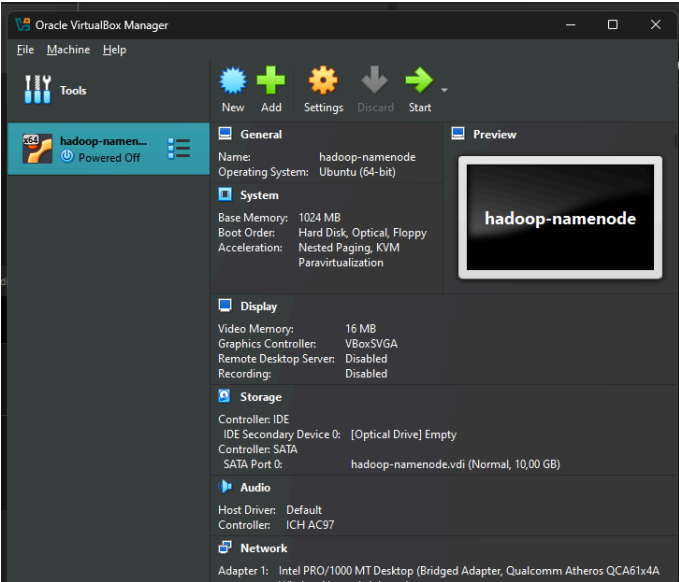
No	Gambar	Deskripsi
1.	 <p>ing-masing, IP Berikut: /windows 10</p>	<p>Menghubungkan ke jaringan VPN Zerotier polinema_hadoop_cluster</p>
2.		<p>Menghubungkan ke Lab Teknologi Data</p>
3.		<p>Mengimpor VM ke Virtual Box</p>

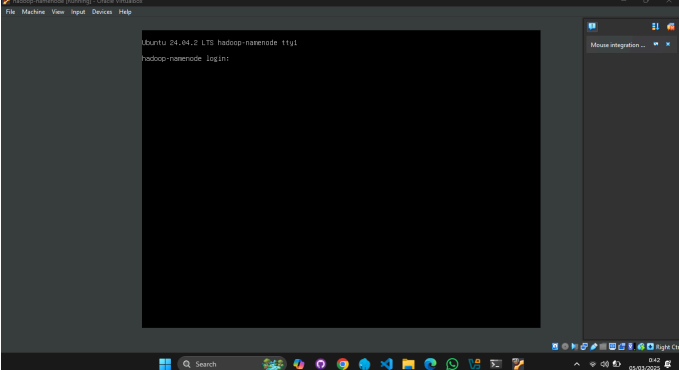
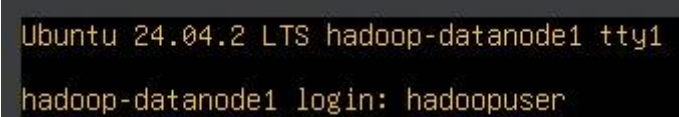

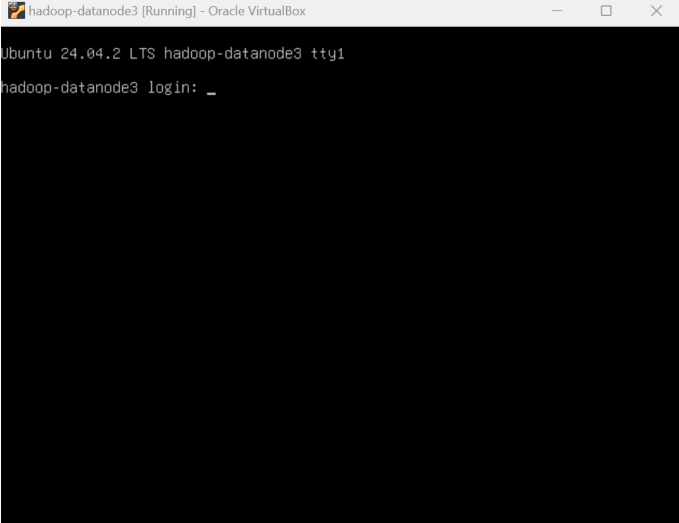


4.



Terjadi error karena network dan grafik display belum diatur

	<pre> ubuntu 24.04.2 LTS hadoop-namenode tty1 hadoop-namenode login: [15.203625] vmwgfx 0000:00:02.0: [drm] *ERROR* vmwgfx seems to be running on an unsupported hypervisor. [15.203643] vmwgfx 0000:00:02.0: [drm] *ERROR* This configuration is likely b roken. [15.203656] vmwgfx 0000:00:02.0: [drm] *ERROR* Please switch to a supported g raphics device to avoid problems. _ </pre>	
5.	  	<p>Melakukan pengaturan network dan display untuk settingan VM</p> <ul style="list-style-type: none"> Ubah network dibagian permission yang awalnya deny menjadi Allow all Ubah Display Graphic Controller yang awalnya VMVSVGA menjadi VBoxSVGA

6.		Berhasil menjalankan Ubuntu Server untuk namenode
7.		Berhasil menjalankan Ubuntu Server untuk datanode 1
8.		Berhasil menjalankan Ubuntu Server untuk datanode 2
9.		Berhasil menjalankan Ubuntu Server untuk datanode 3

10.	<pre>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:7afa:64 brd ff:ff:ff:ff:ff:ff inet 192.168.30.219/23 metric 100 brd 192.168.31.255 scope global dynamic enp0s3 valid_lft 7141sec preferred_lft 7141sec inet6 fe80::a00:27ff:feb7:afa6/64 scope link valid_lft forever preferred_lft forever 3: ztnfacurli: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 2800 qdisc fq_codel state UNKNOWN group default qlen 1000 link/ether 1e:4d:09:48:00:b1 brd ff:ff:ff:ff:ff:ff inet 172.29.247.62/16 brd 172.29.255.255 scope global ztnfacurli valid_lft forever preferred_lft forever inet6 fe80::1c4d:89ff:fe48:b164/64 scope link valid_lft forever preferred_lft forever hadoopuser@hadoop-namenode:~\$ _</pre>	Menampilkan Ip addres pada namenode
11.	<pre>hadoopuser@hadoop-datanode1:~\$ 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 08:00:27:91:4b:9a brd ff:ff:ff:ff:ff:ff inet 192.168.30.217/23 metric 100 brd 192.168.31.255 scope global dynamic enp0s3 valid_lft 6797sec preferred_lft 6797sec inet6 fe80::a00:27ff:fe91:4b9a/64 scope link valid_lft forever preferred_lft forever hadoopuser@hadoop-datanode1:~\$</pre>	Menampilkan Ip addres pada datanode 1
12.	<pre>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 192.168.30.216/23 metric 100 brd 192.168.31.255 scope global dynamic enp0s3 valid_lft 6679sec preferred_lft 6679sec inet6 fe80::a00:27ff:fc9:5536/64 scope link valid_lft forever preferred_lft forever</pre>	Menampilkan Ip addres pada datanode 2
13.	<pre>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 1000 link/ether 08:00:27:a6:58:94 brd ff:ff:ff:ff:ff:ff inet 192.168.30.210/23 metric 100 brd 192.168.31.255 scope global dynamic enp0s3 valid_lft 6440sec preferred_lft 6440sec inet6 fe80::a00:27ff:fea6:5894/64 scope link valid_lft forever preferred_lft forever hadoopuser@hadoop-datanode3:~\$</pre>	Menampilkan Ip addres pada datanode 3
14.	<pre>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 192.168.30.219 hadoop-namenode 192.168.30.217 hadoop-datanode1 192.168.30.216 hadoop-datanode2 192.168.30.210 hadoop-datanode3</pre>	Mengubah ip namenode dan datanode sesuai dengan ip address masing masing anggota

15.	<pre> hadoopuser@hadoop-namenode:~\$ stop-dfs.sh Stopping namenodes on [hadoop-namenode] Stopping datanodes Stopping secondary namenodes [hadoop-namenode] hadoopuser@hadoop-namenode:~\$ stop-yarn.sh Stopping nodemanagers Stopping resourcemanager hadoopuser@hadoop-namenode:~\$ start-dfs.sh Starting namenodes on [hadoop-namenode] Starting datanodes Starting secondary namenodes [hadoop-namenode] hadoopuser@hadoop-namenode:~\$ start-yarn.sh Starting resourcemanager Starting nodemanagers hadoopuser@hadoop-namenode:~\$ jps 2112 NameNode 2342 SecondaryNameNode 2798 Jps 2511 ResourceManager hadoopuser@hadoop-namenode:~\$ _ </pre>	Menampilkan hasil jps pada namenode
16.	<pre> hadoopuser@hadoop-datanode1:~\$ jps 1633 Jps 1544 NodeManager 1389 DataNode </pre>	Menampilkan hasil jps pada datanode 1
17.	<pre> hadoopuser@hadoop-datanode2:~\$ jps 1618 Jps 1379 DataNode 1529 NodeManager hadoopuser@hadoop-datanode2:~\$ </pre>	Menampilkan hasil jps pada datanode 2
18.	<pre> hadoopuser@hadoop-datanode3:~\$ jps 1602 Jps 1362 DataNode 1513 NodeManager </pre>	Menampilkan hasil jps pada datanode 3

TUGAS

1. Terhubunglah ke cluster kelompok Anda melalui terminal dari komputer Anda masing-masing.
2. Buatlah sebuah direktori di cluster Hadoop kelompok Anda masing-masing, dan beri nama sesuai nomor absen dan nama masing-masing dengan format NoAbs_NamaLengkap, sesuai contoh berikut: 13_DanaAnagataNusantara.
3. Unggahlah file TXT biasa yang berisi nama dan nomor absen Anda serta informasi lain yang tidak privat ke folder Anda masing-masing.

No.	Gambar	Deskripsi
1	 <pre> hadoopuser@hadoop-namenode:~\$ hadoop fs -ls / Found 5 items drwxr-xr-x - hadoopuser supergroup 0 2025-03-06 10:53 /03_DikaDwiAlamsyah drwxr-xr-x - hadoopuser supergroup 0 2025-03-06 10:59 /06_FebiolaLidyaSianturi drwxr-xr-x - hadoopuser supergroup 0 2025-03-06 10:59 /14_NurhalizaAnindyaPutri drwxr-xr-x - hadoopuser supergroup 0 2025-03-06 10:59 /19_SeptaPumaSurya drwxr-xr-x - hadoopuser supergroup 0 2025-02-19 16:50 /yunhasnawa hadoopuser@hadoop-namenode:~\$ </pre>	Berhasil membuat direktori sesuai dengan nama anggota kelompok masing-masing
2	 <pre> hadoopuser@hadoop-namenode:~\$ hadoop fs -ls /14_NurhalizaAnindyaPutri/ Found 1 items -rw-r--r-- 3 hadoopuser supergroup 124 2025-03-06 10:59 /14_NurhalizaAnindyaPutri/info.txt hadoopuser@hadoop-namenode:~\$ </pre>	Berhasil membuat dan mengupload file txt di dalam direktori 14_NurhalizaAnindyaPutri (namenode)
3	 <pre> hadoopuser@hadoop-datanode1:~\$ hadoop fs -ls /19_SeptaPumaSurya Found 1 items -rw-r--r-- 3 hadoopuser supergroup 114 2025-03-06 10:59 /19_SeptaPumaSurya/info.txt hadoopuser@hadoop-datanode1:~\$ _ </pre>	Berhasil membuat dan mengupload file txt di dalam direktori 19_SeptaPumaSurya (datanode1)
4	 <pre> Windows PowerShell Copyright (C) Microsoft Corporation. All rights reserved. Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows PS C:\Users\adag> scp C:\Documents\data.txt hadoopuser@172.20.10.4:/home/03_DikaDwiAlamsyah/ C:\Windows\System32\OpenSSH\scp.exe: stat local "C:/Documents/data.txt": No such file or directory PS C:\Users\adag> scp C:\Users\adag\Documents\Kuis\data.txt hadoopuser@172.20.10.4:/home/03_DikaDwiAlamsyah/ The authenticity of host '172.20.10.4 (172.20.10.4)' can't be established. ED25519 key fingerprint is SHA256:BjWtSH68+JEGxCaJyqUW7abcslvs5S+EihBqkH0E. This host key is known by the following other names/addresses: C:\Users\adag/.ssh/known_hosts:2: 172.20.247.62 Are you sure you want to continue connecting (yes/no/[fingerprint])? Warning: Permanently added '172.20.10.4' (ED25519) to the list of known hosts. hadoopuser@172.20.10.4's password: C:\Windows\System32\OpenSSH\scp.exe: dest open "/home/03_DikaDwiAlamsyah/": Failure C:\Windows\System32\OpenSSH\scp.exe: failed to upload file C:/Users/adag/Documents/Kuis/data.txt to /home/03_DikaDwiAlamsyah/ PS C:\Users\adag> scp C:\Users\adag\Documents\Kuis\data.txt hadoopuser@172.20.10.4:/03_DikaDwiAlamsyah/ hadoopuser@172.20.10.4's password: C:\Windows\System32\OpenSSH\scp.exe: dest open "/03_DikaDwiAlamsyah/": Failure C:\Windows\System32\OpenSSH\scp.exe: failed to upload file C:/Users/adag/Documents/Kuis/data.txt to /03_DikaDwiAlamsyah/ PS C:\Users\adag> scp C:\Users\adag\Documents\Kuis\data.txt hadoopuser@172.20.10.4:/home/hadoopuser/ hadoopuser@172.20.10.4's password: data.txt 100% 74 12.0KB/s 00:00 PS C:\Users\adag> </pre>	Berhasil membuat file txt melalui lokal, kemudian di upload file txt ke vm ubuntu
5	 <pre> hadoopuser@hadoop-datanode2:~\$ hadoop fs -put /home/hadoopuser/data.txt /03_DikaDwiAlamsyah/ hadoopuser@hadoop-datanode2:~\$ hadoop fs -ls /03_DikaDwiAlamsyah/ Found 1 items -rw-r--r-- 3 hadoopuser supergroup 74 2025-03-06 11:12 /03_DikaDwiAlamsyah/data.txt hadoopuser@hadoop-datanode2:~\$ hadoopuser@hadoop-datanode2:~\$ hadoop fs -cat /03_DikaDwiAlamsyah/data.txt 03 2241720129 Teknologi Informasi Teknik Informatika hadoopuser@hadoop-datanode2:~\$ _ </pre>	Mengupload file ke hadoop serta mengecek apakah file sudah berhasil di upload ke direktori yang ditentukan dan mengecek apakah data yang di upload apakah sama
		Berhasil upload dan berhasil ke direktori 03_DikaDwiAlamsyah (datanode2)
6	 <pre> hadoopuser@hadoop-datanode3:~\$ hadoop fs -ls /06_FebiolaLidyaSianturi/ Found 1 items -rw-r--r-- 3 hadoopuser supergroup 131 2025-03-06 10:59 /06_FebiolaLidyaSianturi/info.txt </pre>	Berhasil membuat dan mengupload file txt di dalam direktori 06_FebiolaLidyaSianturi (datanode3)

