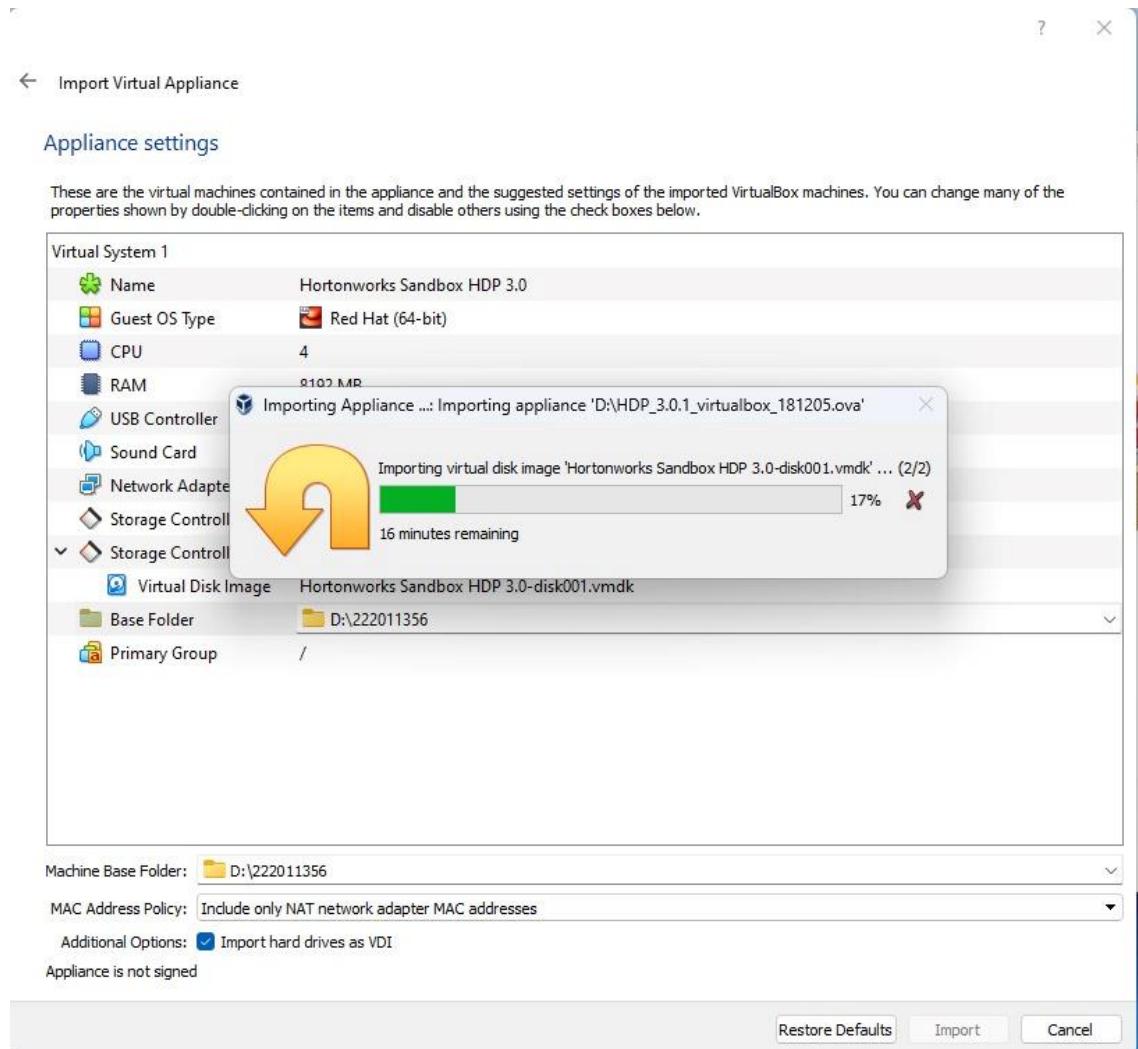


Nama : Komang Niko Romano Prodi
NIM : 222011356
Kelas : 3SD1
No Absen : 06

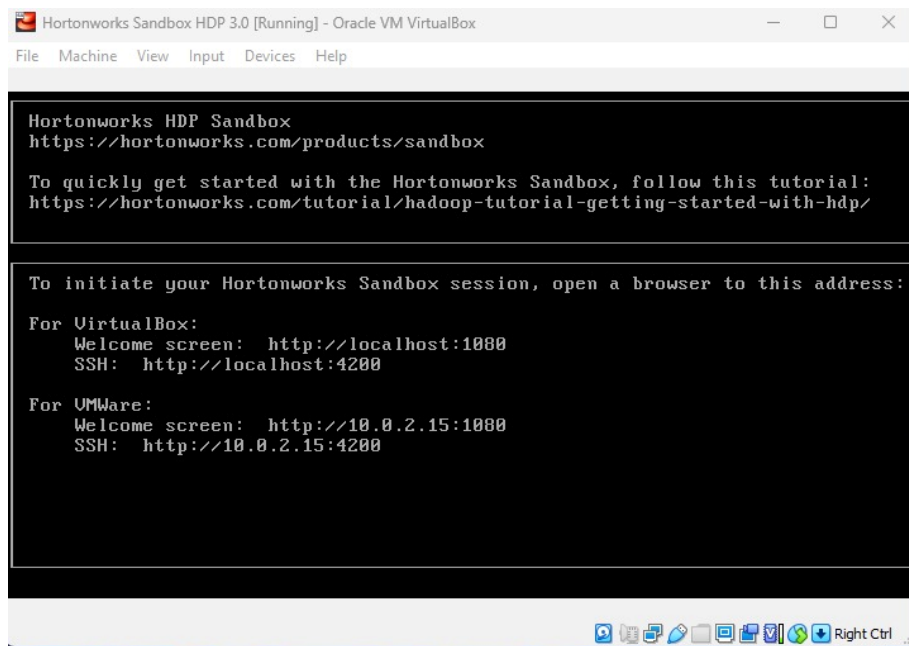
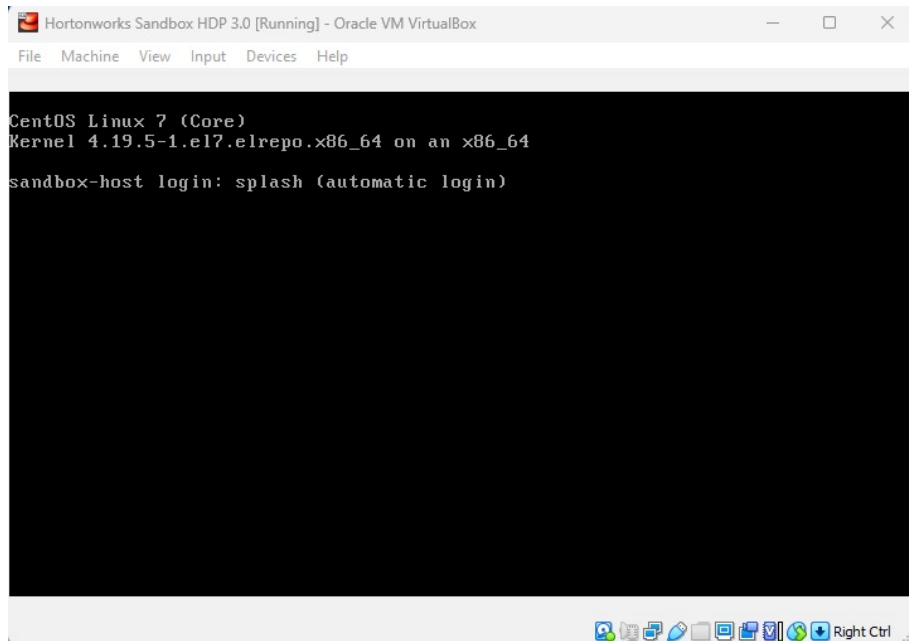
Teknologi Big Data (TBD) : Penggunaan Hadoop

Modul Praktikum 1

1. Import Virtual Appliance



2. Running Virtual Box



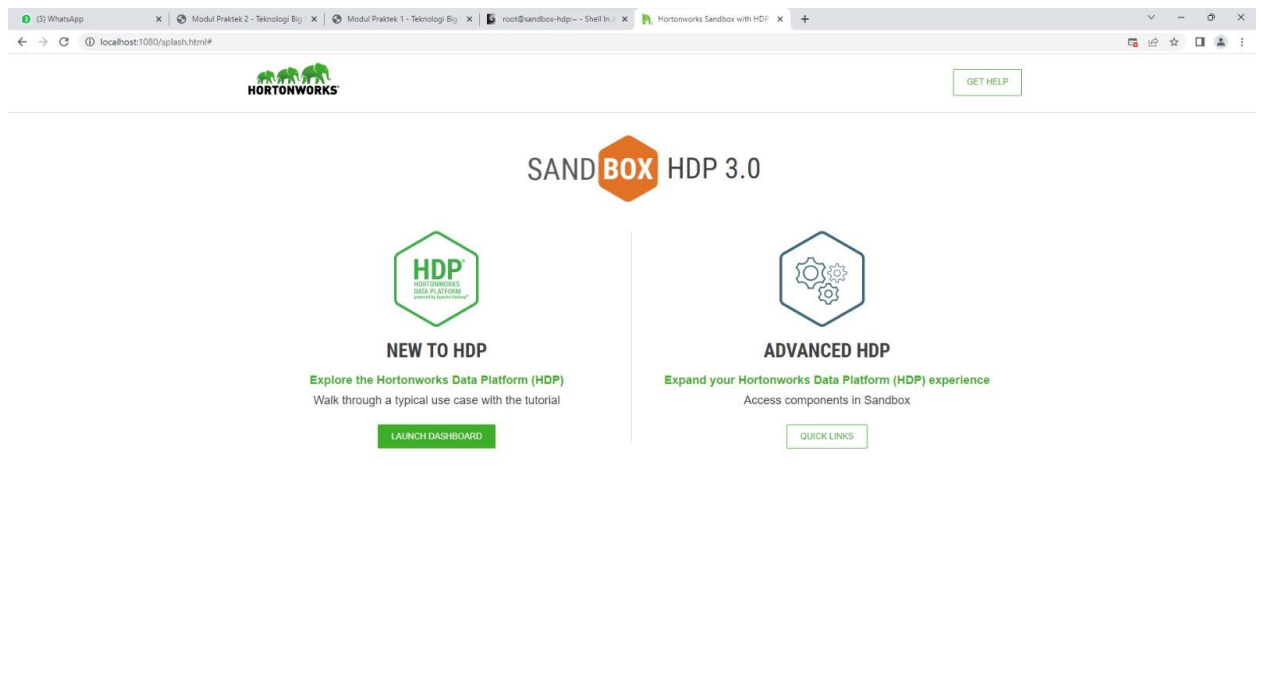
3. Reset Password serta Set Password

```
sandbox-hdp login: root
root@sandbox-hdp.hortonworks.com's password:
You are required to change your password immediately (root enforced)
Last login: Thu Nov 29 18:47:14 2018
Changing password for root.
(current) UNIX password:
New password:
Retype new password:
[root@sandbox-hdp ~]# ambari-admin-password-reset
-bash: ambari-admin-passwambari-admin-password-reset: command not found
[root@sandbox-hdp ~]# ambari-admin-password-rest
-bash: ambari-admin-password-rest: command not found
[root@sandbox-hdp ~]# ambari-admin-password-reset
Please set the password for admin:
Please retype the password for admin:

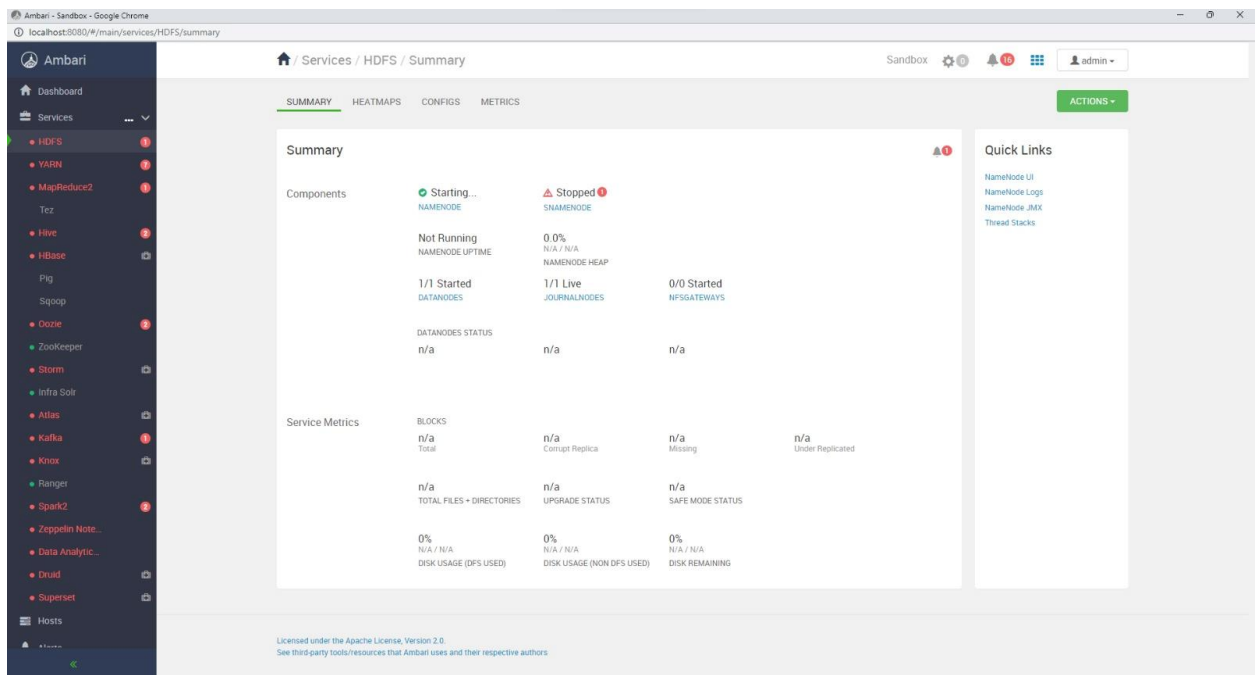
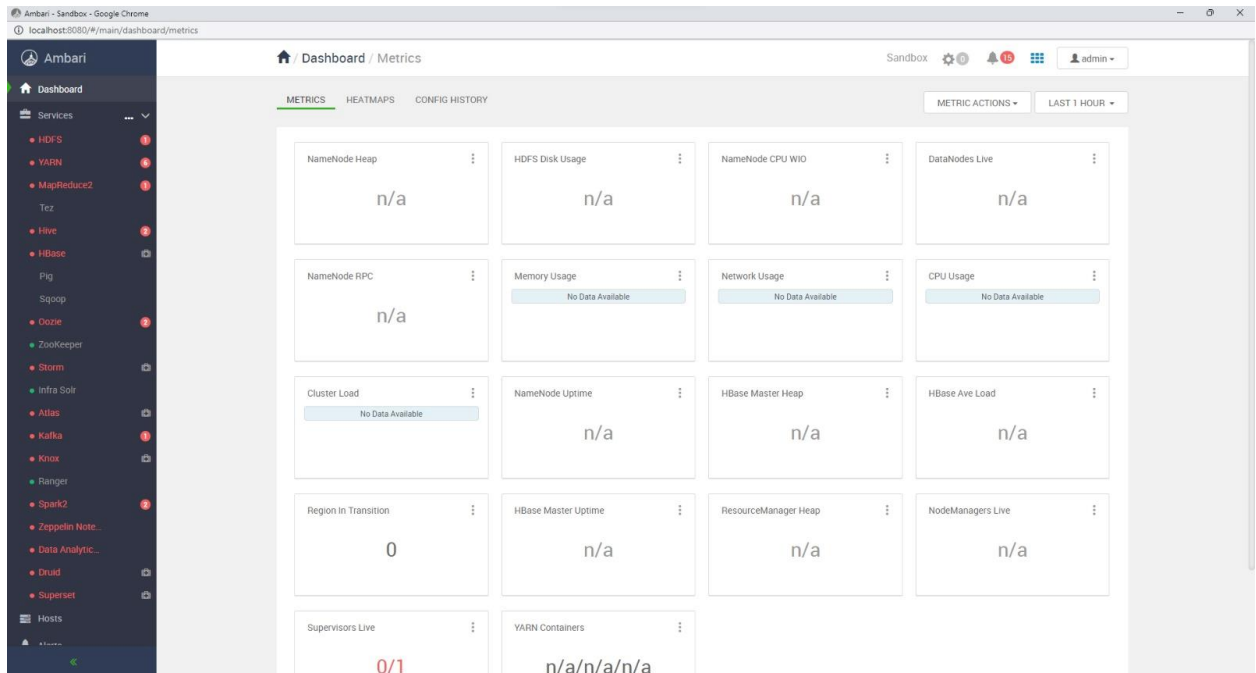
The admin password has been set.
Restarting ambari-server to make the password change effective...

Using python /usr/bin/python
Restarting ambari-server
Waiting for server stop...
Ambari Server stopped
Ambari Server running with administrator privileges.
Organizing resource files at /var/lib/ambari-server/resources...
Ambari database consistency check started...
Server PID at: /var/run/ambari-server/ambari-server.pid
Server out at: /var/log/ambari-server/ambari-server.out
Server log at: /var/log/ambari-server/ambari-server.log
Waiting for server start.....
```

4. Launch Dashboard

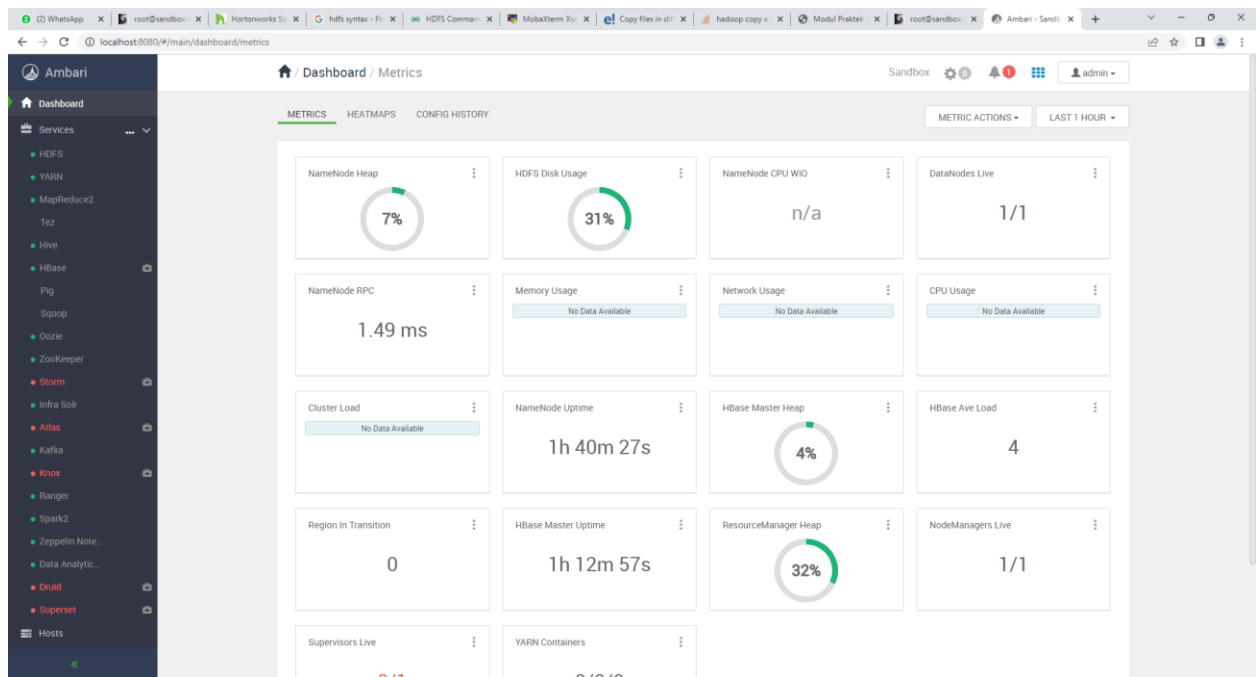


5. Dashboard Ambari



Modul Praktikum 2

1. Akses Ambari



2. Identifikasi Services

The screenshot displays the Ambari Alerts page. The left sidebar is the same as the previous screenshot. The main content area shows a table of alerts:

Status	Alert Definition Name	Service	Last Status Changed	State
CRIT	Storm Web UI	Storm	4 years ago	Enabled
CRIT	Supervisor Process	Storm	4 years ago	Enabled
CRIT	Nimbus Process	Storm	4 years ago	Enabled
CRIT	DRPC Server Process	Storm	4 years ago	Enabled
CRIT	Druid Broker Process	Druid	4 years ago	Enabled
CRIT	Druid Historical Process	Druid	4 years ago	Enabled
CRIT	Druid Overlord Web UI	Druid	4 years ago	Enabled
CRIT	Druid Coordinator Web UI	Druid	4 years ago	Enabled
CRIT	Druid Middlemanager Process	Druid	4 years ago	Enabled
CRIT	Druid Router Process	Druid	4 years ago	Enabled

Items per page: 10 1 - 10 of 92

3. Melakukan konfigurasi dan troubleshoot pada komponen Hadoop.

The image shows a terminal window and the Ambari web interface. The terminal window displays the process of resetting the Ambari admin password, restarting the Ambari server, and checking the status of the Ambari server. The Ambari web interface shows the 'Hosts' page with a table of hosts.

Terminal Output:

```
[root@sandbox-hdp ~]# ambari-admin-password-reset
-bash: ambari-admin-password-reset: command not found
[root@sandbox-hdp ~]# ambari-admin-password-reset
Please set the password for admin:
Please retype the password for admin:

The admin password has been set.
Restarting ambari-server to make the password change effective...

Using python /usr/bin/python
Restarting ambari-server
Waiting for server stop...
Ambari Server stopped
Ambari Server running with administrator privileges.
Organizing resource files at /var/lib/ambari-server/resources...
Ambari database consistency check started...
Server PID at: /var/run/ambari-server/ambari-server.pid
Server out at: /var/log/ambari-server/ambari-server.out
Server log at: /var/log/ambari-server/ambari-server.log
Waiting for server start.....
Server started listening on 8080

DB configs consistency check: no errors and warnings were found.
[root@sandbox-hdp ~]# ambari-server status
Using python /usr/bin/python
Ambari-server status
Ambari Server running
Found Ambari Server PID: 9183 at: /var/run/ambari-server/ambari-server.pid
[root@sandbox-hdp ~]# systemctl status nginx
Unit nginx.service could not be found.
[root@sandbox-hdp ~]# ambari-server stop
Using python /usr/bin/python
Stopping ambari-server
Waiting for server stop...
Ambari Server stopped
[root@sandbox-hdp ~]# ambari-server start
Using python /usr/bin/python
Starting ambari-server
Ambari Server running with administrator privileges.
Organizing resource files at /var/lib/ambari-server/resources...
Ambari database consistency check started...
Server PID at: /var/run/ambari-server/ambari-server.pid
Server out at: /var/log/ambari-server/ambari-server.out
Server log at: /var/log/ambari-server/ambari-server.log
Waiting for server start.....
Server started listening on 8080

DB configs consistency check: no errors and warnings were found.
Ambari Server 'start' completed successfully.
[root@sandbox-hdp ~]#
```

Ambari Web Interface:

The Ambari web interface shows the 'Hosts' page. The table below lists the hosts in the cluster:

Name	IP Address	Rack	Cores	RAM	Disk Usage	Load Avg	Versions	Components
sandbox-hdp.hortonwor...	172.18.0.2	/default-rack	4 (4)	7.79GB			HDP-3.0.1.0	54 Components

Items per page: 10 1 - 1 of 1

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See third-party tools/resources that Ambari uses and their respective authors

Background Operations

1 Background Operation Running

ALL (0)

Operations	Status	User	Start Time	Duration
Start All Components	100%	admin	Not started	n/a
Start All Components	100%	admin	Not started	n/a
Start All Components	28%	admin	Today 09:58	1m 26s
Start All Services	100%	raj_ops	Today 09:41	3m 20s
Stop required services	100%	admin	Fri Nov 30 2018 02:17	38s
Stop required services	100%	admin	Fri Nov 30 2018 02:17	11s

☐ Do not show this dialog again when starting a background operation

OK

4. Menggunakan Fitur Hadoop

Ambari

Dashboard

Services

HDFS

YARN

MapReduce2

Tez

Hive

HBase

Pig

Sqoop

Oozie

ZooKeeper

Storm

Infra Solr

Atlas

Kafka

Knox

Ranger

Spark2

Zeppelin Note...

Data Analytic...

Druid

Superset

Hosts

Files View

Sandbox

admin

Total: 13 files or folders

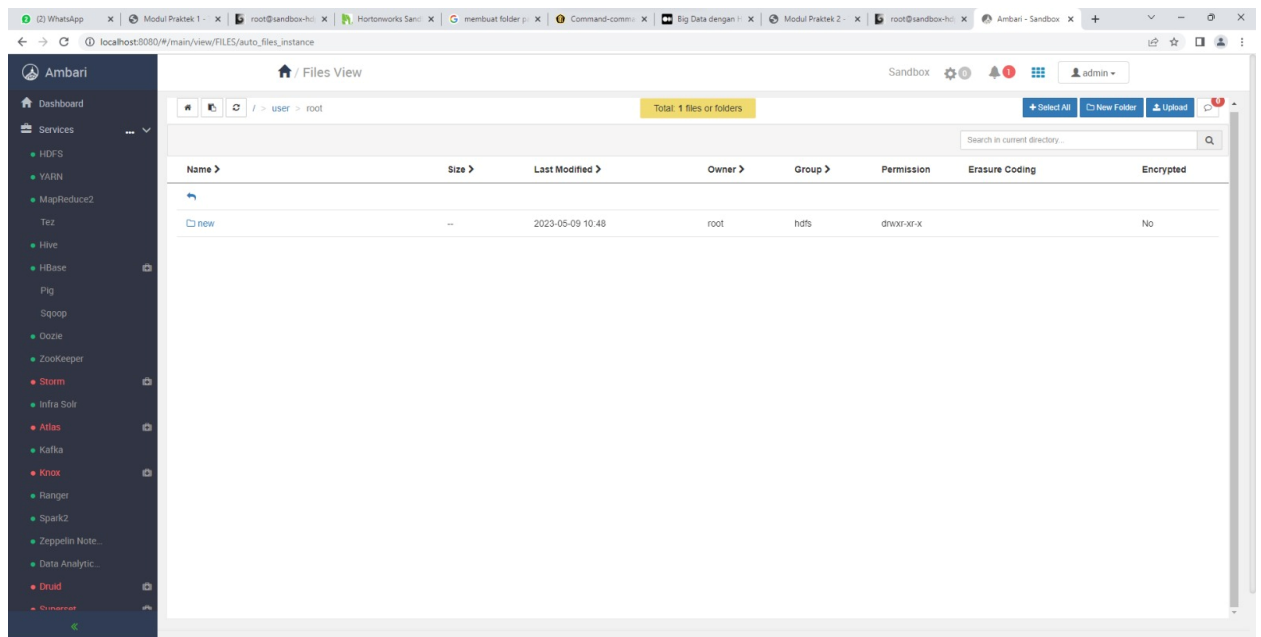
Select AllNew FolderUpload

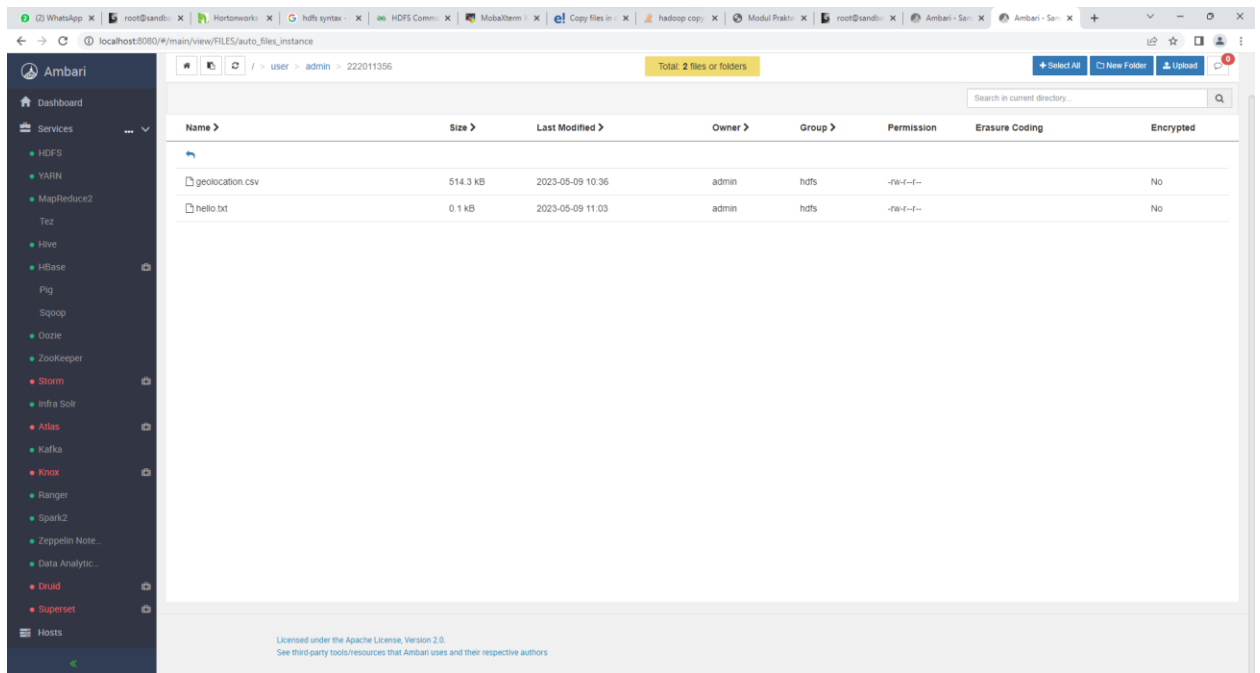
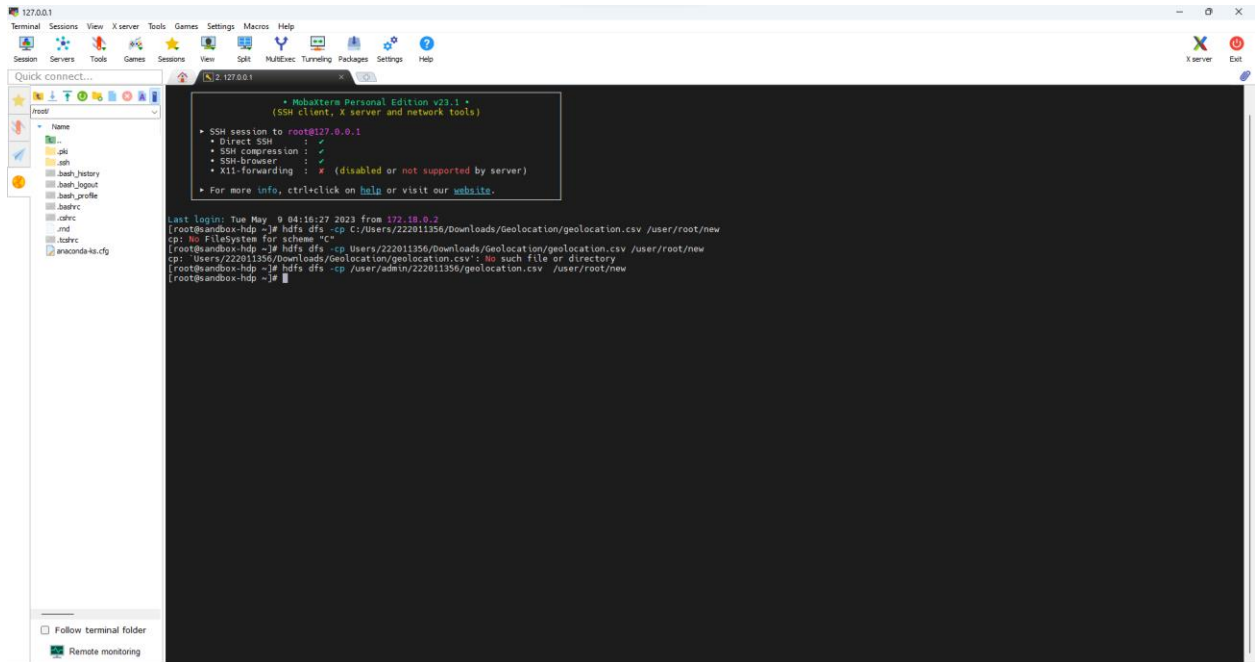
Search in current directory...

Name	Size	Last Modified	Owner	Group	Permission	Erasure Coding	Encrypted
app-logs	--	2018-11-30 00:56	yarn	hadoop	drwxrwxrwx		No
apps	--	2018-11-30 02:01	hdfs	hdfs	drwxr-xr-x		No
ats	--	2018-11-30 00:25	yarn	hadoop	drwxr-xr-x		No
atsv2	--	2018-11-30 00:26	hdfs	hdfs	drwxr-xr-x		No
hdp	--	2018-11-30 00:26	hdfs	hdfs	drwxr-xr-x		No
ivy2-recovery	--	2018-11-30 00:55	ivy	hdfs	drwx-----		No
mapred	--	2018-11-30 00:26	mapred	hdfs	drwxr-xr-x		No
mr-history	--	2018-11-30 00:26	mapred	hadoop	drwxrwxrwx		No
ranger	--	2018-11-30 01:54	hdfs	hdfs	drwxr-xr-x		No
spark2-history	--	2023-05-09 11:27	spark	hadoop	drwxrwxrwx		No
tmp	--	2018-11-30 02:01	hdfs	hdfs	drwxrwxrwx		No
user	--	2018-11-30 02:21	hdfs	hdfs	drwxr-xr-x		No
warehouse	--	2018-11-30 00:51	hdfs	hdfs	drwxr-xr-x		No

5. Load Data ke Hadoop

```
sandbox-hdp login: root
root@sandbox-hdp.hortonworks.com's password:
Last login: Tue May 9 03:28:31 2023
[root@sandbox-hdp ~]# hdfs dfs -ls user/admin/222011356
ls: 'user/admin/222011356': No such file or directory
[root@sandbox-hdp ~]# hdfs dfs -ls admin/222011356
ls: 'admin/222011356': No such file or directory
[root@sandbox-hdp ~]# hdfs dfs -ls
Found 13 items
drwxr-xr-x  - yarn  hadoop      0 2018-11-29 17:56 /app-logs
drwxr-xr-x  - hdfs  hdfs      0 2018-11-29 19:01 /apps
drwxr-xr-x  - yarn  hadoop      0 2018-11-29 17:25 /ats
drwxr-xr-x  - hdfs  hdfs      0 2018-11-29 17:26 /atsv2
drwxr-xr-x  - hdfs  hdfs      0 2018-11-29 17:26 /hdp
drwxr-xr-x  - livy  hdfs      0 2018-11-29 17:55 /livy2-recovery
drwxr-xr-x  - mapred hdfs      0 2018-11-29 17:26 /mapred
drwxr-xr-x  - mapred hadoop      0 2018-11-29 17:26 /mr-history
drwxr-xr-x  - hdfs  hdfs      0 2018-11-29 18:54 /ranger
drwxr-xr-x  - spark hadoop      0 2023-05-09 03:40 /spark2-history
drwxr-xr-x  - hdfs  hdfs      0 2018-11-29 19:01 /tmp
drwxr-xr-x  - hdfs  hdfs      0 2018-11-29 19:21 /user
drwxr-xr-x  - hdfs  hdfs      0 2018-11-29 17:51 /warehouse
[root@sandbox-hdp ~]# hdfs dfs -ls /user/admin/222011356
Found 1 items
-rw-r--r--  1 admin hdfs    526677 2023-05-09 03:36 /user/admin/222011356/geolocation.csv
[root@sandbox-hdp ~]# hdfs dfs rm /user/admin/new
rm: Unknown command
Did you mean 'rm'? This command begins with a dash.
Usage: hadoop fs [generic options]
[-appendToFile <localsrc> ... <dst>]
[-cat [-ignoreCrc] <src> ...]
[-checksum <src> ...]
[-chgrp [-R] GROUP PATH...]
[-chmod [-R] <MODE[,MODE]... | OCTALMODE> PATH...]
[-chown [-R] [OWNER][:[GROUP]] PATH...]
[-copyFromLocal [-f] [-p] [-l] [-d] [-t <thread count>] <localsrc> ... <dst>]
[-copyToLocal [-f] [-p] [-ignoreCrc] [-crc] <src> ... <localdst>]
[-count [-q] [-h] [-v] [-t <storage type>] [-u] [-x] [-e] <path> ...]
[-cp [-f] [-p] [-p[topax]] [-d] <src> ... <dst>]
[-createSnapshot <snapshotDir> [<snapshotName>]]
[-deleteSnapshot <snapshotDir> <snapshotName>]
[-df [-h] [<path> ...]]
[-du [-s] [-h] [-v] [-x] <path> ...]
[-expunge]
[-find <path> ... <expression> ...]
[-get [-f] [-p] [-ignoreCrc] [-crc] <src> ... <localdst>]
[-hadoopfs -b] <path> ...
```





6. Contoh Command HDFS

- a. Membaca file atau folder dengan -cat

```
sandbox-hdp login: root
root@sandbox-hdp.hortonworks.com's password:
Last login: Tue May  9 04:09:03 2023 from 172.18.0.3
[root@sandbox-hdp ~]# hdfs dfs -cat /user/admin/222011356/hello.txt
Hello World! [root@sandbox-hdp ~]#
```

- b. Mengetahui ukuran tiap file dalam folder atau satu file dengan -du

```
[root@sandbox-hdp ~]# hdfs dfs -du /user/admin/222011356/hello.txt
13 13 /user/admin/222011356/hello.txt
[root@sandbox-hdp ~]#
```

- c. Mengetahui history dari file dengan -stat

```
[root@sandbox-hdp ~]# hdfs dfs -stat /user/admin/222011356/hello.txt
2023-05-09 04:03:56
[root@sandbox-hdp ~]# █
```