

Task 1:

- 1) Start Hadoop single node on Acadgild VM.

Command start-all.sh starts all Hadoop Daemons

```
acadgild@localhost:~  
File Edit View Search Terminal Help  
[acadgild@localhost ~]$ jps  
3367 Jps  
[acadgild@localhost ~]$ start-all.sh  
This script is deprecated. Instead use start-dfs.sh and start-yarn.sh  
18/08/25 14:33:18 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl  
asses where applicable  
Starting namenodes on [localhost]  
localhost: starting namenode, logging to /home/acadgild/install/hadoop/hadoop-2.6.5/logs/hadoop-acadgild-namenode-localhost.l  
ocaldomain.out  
localhost: starting datanode, logging to /home/acadgild/install/hadoop/hadoop-2.6.5/logs/hadoop-acadgild-datanode-localhost.l  
ocaldomain.out  
Starting secondary namenodes [0.0.0.0]  
0.0.0.0: starting secondarynamenode, logging to /home/acadgild/install/hadoop/hadoop-2.6.5/logs/hadoop-acadgild-secondaryname  
node-localhost.localdomain.out  
18/08/25 14:33:51 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl  
asses where applicable  
starting yarn daemons  
starting resourcemanager, logging to /home/acadgild/install/hadoop/hadoop-2.6.5/logs/yarn-acadgild-resourcemanager-localhost.  
localdomain.out  
localhost: starting nodemanager, logging to /home/acadgild/install/hadoop/hadoop-2.6.5/logs/yarn-acadgild-nodemanager-localhost.  
localdomain.out  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost ~]$
```

- 2) Run a JPS command to see if all Hadoop daemons are running

JPS command displays active Hadoop daemons

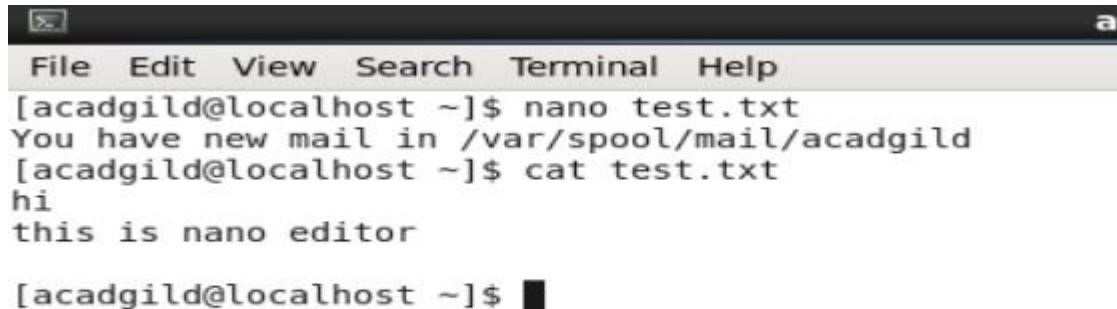
```
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost ~]$ jps  
3617 DataNode  
3521 NameNode  
3745 SecondaryNameNode  
4434 Jps  
4052 NodeManager  
3915 ResourceManager  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost ~]$
```

- 3) Run few Unix commands like pwd, ls -ls ,etc

pwd gives present working directory. ls -ls gives list of files with long format with file size.who command gives list of users currently logged in.date command gives current date with time

```
[acadgild@localhost ~]$ pwd  
/home/acadgild  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost ~]$ ls  
Desktop  df2.txt  Documents  eclipse  eclipse-workspace  install  Pictures  spark.zip  Videos  
df1.txt  df_data.txt  Downloads  eclipse-workspace  Music  Public  Templates  
[acadgild@localhost ~]$ ls -ls  
total 60  
4 drwxr-xr-x. 3 acadgild acadgild 4096 Aug 5 14:42 Desktop  
4 -rw-rw-r--. 1 acadgild acadgild 1862 Aug 18 10:07 df1.txt  
4 -rw-rw-r--. 1 acadgild acadgild 535 Aug 18 10:10 df2.txt  
4 -rw-rw-r--. 1 acadgild acadgild 399 Aug 18 10:11 df_data.txt  
4 drwxr-xr-x. 2 acadgild acadgild 4096 Feb 2 2018 Documents  
4 drwxr-xr-x. 2 acadgild acadgild 4096 Feb 13 2018 Downloads  
4 drwxrwxr-x. 3 acadgild acadgild 4096 Dec 29 2017 eclipse  
4 drwxrwxr-x. 4 acadgild acadgild 4096 Aug 5 17:28 eclipse-workspace  
4 drwxrwxr-x. 13 acadgild acadgild 4096 Feb 9 2018 install  
4 drwxr-xr-x. 2 acadgild acadgild 4096 Dec 27 2017 Music  
4 drwxr-xr-x. 2 acadgild acadgild 4096 Dec 27 2017 Pictures  
4 drwxr-xr-x. 2 acadgild acadgild 4096 Dec 27 2017 Public  
4 -rw-rw-r--. 1 acadgild acadgild 1530 Aug 18 15:20 spark.zip  
4 drwxr-xr-x. 2 acadgild acadgild 4096 Dec 27 2017 Templates  
4 drwxr-xr-x. 2 acadgild acadgild 4096 Dec 27 2017 Videos  
[acadgild@localhost ~]$ who  
acadgild tty1 2018-08-25 14:29 (:0)  
acadgild pts/0 2018-08-25 14:31 (:0.0)  
acadgild pts/1 2018-08-25 14:31 (:0.0)  
[acadgild@localhost ~]$ cd  
[acadgild@localhost ~]$ date  
Sat Aug 25 15:29:47 IST 2018
```

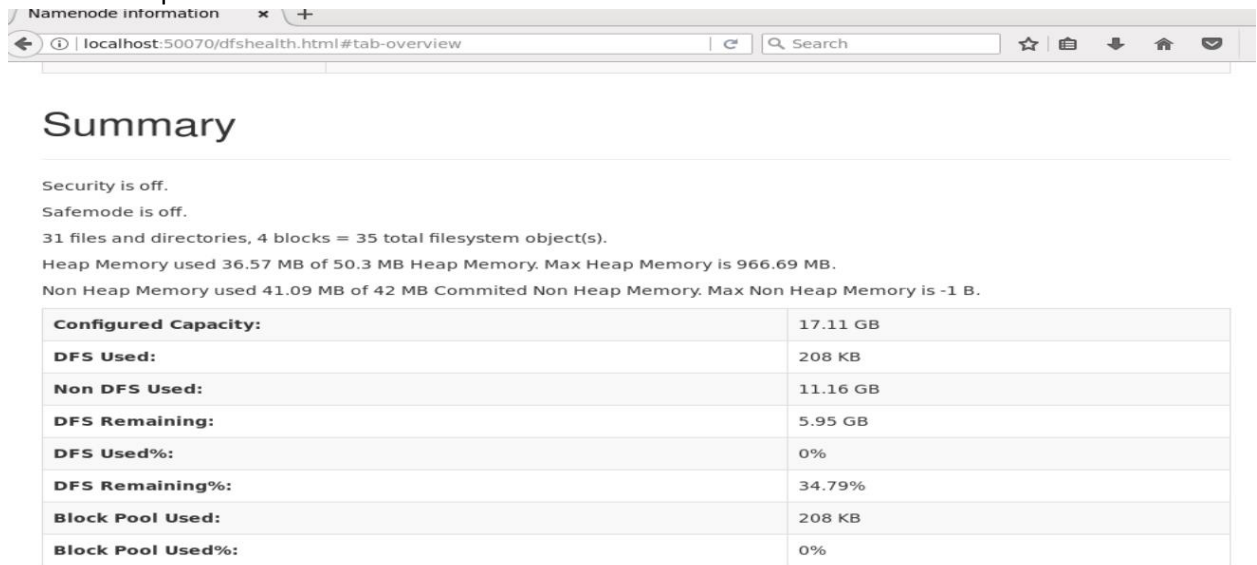
- 4) Create a file from the terminal using nano editor (example : nano test.txt), and add some content in it. Cat to see if the content is saved
nano command is used to create a file and use I to insert data into it. cat command displays the content of the file

A terminal window with a dark background and light text. The menu bar at the top includes 'File', 'Edit', 'View', 'Search', 'Terminal', and 'Help'. The prompt is '[acadgild@localhost ~]'. The user enters 'nano test.txt', followed by a message 'You have new mail in /var/spool/mail/acadgild'. Then the user enters 'cat test.txt', and the output 'hi' and 'this is nano editor' is displayed. The prompt returns to '[acadgild@localhost ~]\$' with a cursor.

```
[acadgild@localhost ~]$ nano test.txt
You have new mail in /var/spool/mail/acadgild
[acadgild@localhost ~]$ cat test.txt
hi
this is nano editor

[acadgild@localhost ~]$
```

- 5) Open the hdfs web page by typing localhost:50070 in the browser. Check the details of the HDFS
50070 is the port number of local host

A screenshot of a web browser showing the HDFS NameNode information page. The address bar shows 'localhost:50070/dfshealth.html#tab-overview'. The page title is 'Summary'. Below the title, there are status messages: 'Security is off.', 'Safemode is off.', and file/directory counts. A table follows, showing capacity and usage statistics for DFS and Block Pools.

Summary	
Security is off.	
Safemode is off.	
31 files and directories, 4 blocks = 35 total filesystem object(s).	
Heap Memory used 36.57 MB of 50.3 MB Heap Memory. Max Heap Memory is 966.69 MB.	
Non Heap Memory used 41.09 MB of 42 MB Committed Non Heap Memory. Max Non Heap Memory is -1 B.	
Configured Capacity:	17.11 GB
DFS Used:	208 KB
Non DFS Used:	11.16 GB
DFS Remaining:	5.95 GB
DFS Used%:	0%
DFS Remaining%:	34.79%
Block Pool Used:	208 KB
Block Pool Used%:	0%

Task 2:

Check whether /user/acadgild directory exists or not in the HDFS

If it doesn't exist, then create this.

Create a directory /user/acadgild/Hadoop

When I type `hadoop fs -ls /user/acadgild` it has thrown me an error saying no such file or directory exists. Created directory using `Hadoop fs -mkdir /user/acadgild/hadoop` in recursive manner

```
acadgild@localhost:~  
File Edit View Search Terminal Help  
[acadgild@localhost ~]$ hadoop fs -ls /user/acadgild  
18/08/27 15:44:57 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl  
asses where applicable  
ls: `/user/acadgild': No such file or directory  
[acadgild@localhost ~]$ hadoop fs -mkdir /user/acadgild  
18/08/27 15:45:15 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl  
asses where applicable  
[acadgild@localhost ~]$ hadoop fs -mkdir /user/acadgild/hadoop  
18/08/27 15:45:45 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl  
asses where applicable  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost ~]$ hadoop fs -ls /user/acadgild  
18/08/27 15:45:53 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl  
asses where applicable  
Found 1 items  
drwxr-xr-x - acadgild supergroup 0 2018-08-27 15:45 /user/acadgild/hadoop  
[acadgild@localhost ~]$
```

Task 3:

Create a file in HDFS under directory /user/acadgild, with name word-count.txt.

Whatever we type on screen should get appended to the file.

Try to type(on screen) few lines from any online article or textbook.

Created word-count.txt in localhost and copied to HDFS system. Edited the file in local system and used –appendToFile to append the edited text in existing file

```
acadgild@localhost:~  
File Edit View Search Terminal Help  
[acadgild@localhost ~]$ vi word-count.txt  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost ~]$ cat word-count.txt  
This is original message  
[acadgild@localhost ~]$ hadoop fs -put word-count.txt /user/acadgild/hadoop  
18/08/27 16:21:51 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl  
asses where applicable  
[acadgild@localhost ~]$ hadoop fs -ls /user/acadgild/hadoop  
18/08/27 16:22:07 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl  
asses where applicable  
Found 2 items  
-rwxrwx--- 1 acadgild supergroup 140 2018-08-27 16:11 /user/acadgild/hadoop/max-temp.txt  
-rw-r--r-- 1 acadgild supergroup 25 2018-08-27 16:21 /user/acadgild/hadoop/word-count.txt  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost ~]$ hadoop fs -cat /user/acadgild/hadoop/word-count.txt  
18/08/27 16:22:30 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl  
asses where applicable  
This is original message  
[acadgild@localhost ~]$
```

Text edited in local system

```
acadgild@localhost:~  
File Edit View Search Terminal Help  
[acadgild@localhost ~]$ vi word-count.txt  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost ~]$ cat word-count.txt  
This is original message  
This is after appending
```

Text after appending

```
acadgild@localhost:~  
File Edit View Search Terminal Help  
[acadgild@localhost ~]$ vi word-count.txt  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost ~]$ cat word-count.txt  
This is original message  
This is after appending  
[acadgild@localhost ~]$ hadoop fs -appendToFile word-count.txt /user/acadgild/hadoop/word-count.txt  
18/08/27 16:25:32 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl  
asses where applicable  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost ~]$ hadoop fs -cat /user/acadgild/hadoop/word-count.txt  
18/08/27 16:25:40 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl  
asses where applicable  
This is original message  
This is after appending  
[acadgild@localhost ~]$
```

Task 4:

Create a file max-temp.txt in Local FS.

Put some 10-15 records of date and temperature

Move this file to HDFS at /user/acadgild/Hadoop

```
acadgild@localhost:~  
File Edit View Search Terminal Help  
[acadgild@localhost ~]$ vi max-temp.txt  
[acadgild@localhost ~]$ cat max-temp.txt  
11-08-1993,25  
28-07-1994,30  
21-07-1994,55  
04-05-1990,20  
23-09-1945,33  
21-10-1999,55  
31-12-2010,45  
13-11-2011,35  
20-01-2015,42  
19-02-2017,53  
[acadgild@localhost ~]$ hadoop fs -ls /user/acadgild/hadoop  
18/08/27 16:11:24 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl  
asses where applicable  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost ~]$ hadoop fs -put max-temp.txt /user/acadgild/hadoop  
18/08/27 16:11:33 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl  
asses where applicable  
[acadgild@localhost ~]$ hadoop fs -ls /user/acadgild/hadoop  
18/08/27 16:11:42 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl  
asses where applicable  
Found 1 items  
-rw-r--r-- 1 acadgild supergroup 140 2018-08-27 16:11 /user/acadgild/hadoop/max-temp.txt  
[acadgild@localhost ~]$
```

Task 5:

Change the permission of the file /user/acadgild/Hadoop/max-temp.txt, such that only the owner and the group members have full control over the file.

Others do not have any control over it.

```
acadgild@localhost:~  
File Edit View Search Terminal Help  
[acadgild@localhost ~]$ hadoop fs -ls /user/acadgild/hadoop  
18/08/27 16:17:37 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl  
asses where applicable  
Found 1 items  
-rw-r--r-- 1 acadgild supergroup 140 2018-08-27 16:11 /user/acadgild/hadoop/max-temp.txt  
[acadgild@localhost ~]$ hadoop fs -chmod 770 /user/acadgild/hadoop/max-temp.txt  
18/08/27 16:18:04 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl  
asses where applicable  
[acadgild@localhost ~]$ hadoop fs -ls /user/acadgild/hadoop  
18/08/27 16:18:11 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl  
asses where applicable  
Found 1 items  
-rwxrwx--- 1 acadgild supergroup 140 2018-08-27 16:11 /user/acadgild/hadoop/max-temp.txt  
[acadgild@localhost ~]$
```