

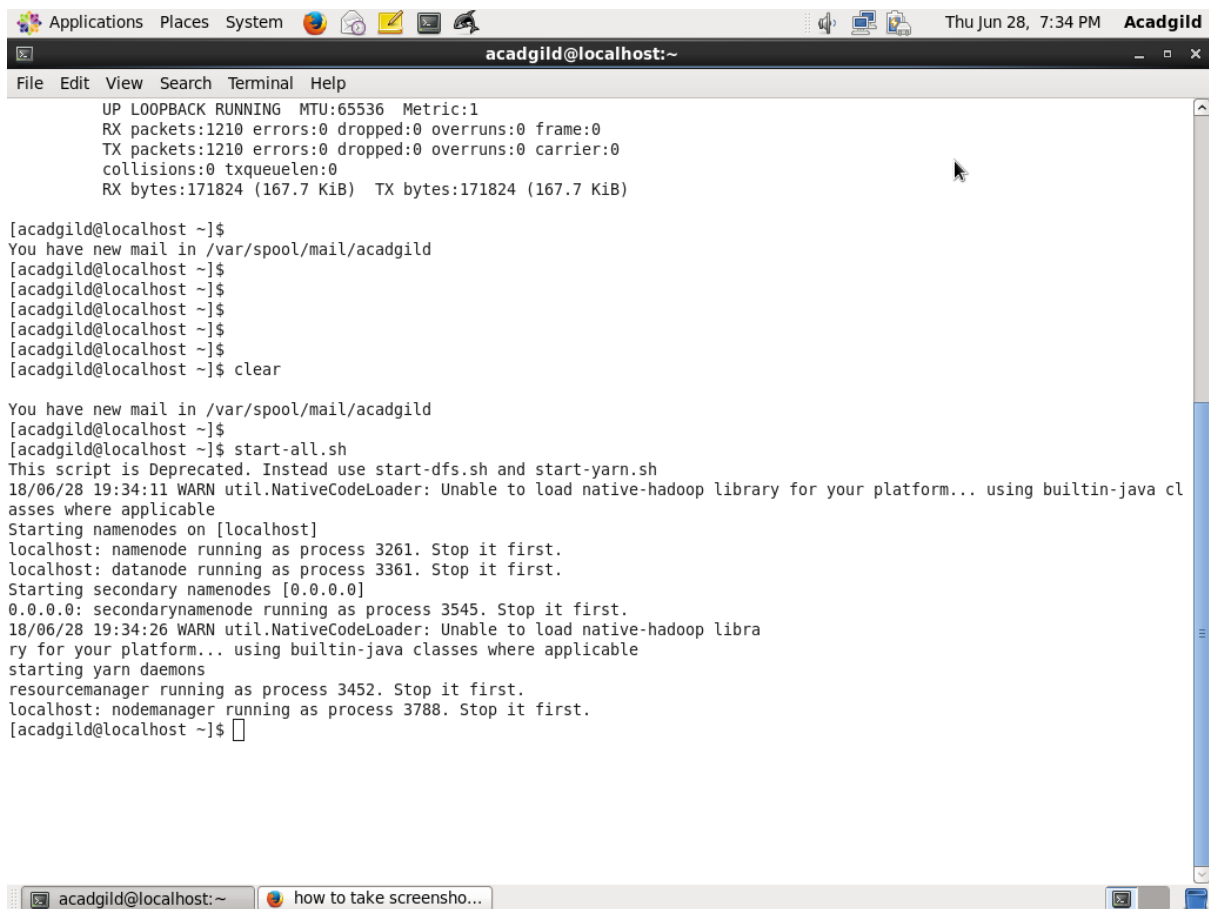
Assignment 1.1

This assignment includes the following tasks:

- 1) Start Hadoop single node on AcadGild VM.

We will use *start-all.sh* command to start the Hadoop Single node(See Attached).

Command: *start-all.sh*



```
UP LOOPBACK RUNNING MTU:65536 Metric:1
RX packets:1210 errors:0 dropped:0 overruns:0 frame:0
TX packets:1210 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:0
RX bytes:171824 (167.7 KiB) TX bytes:171824 (167.7 KiB)

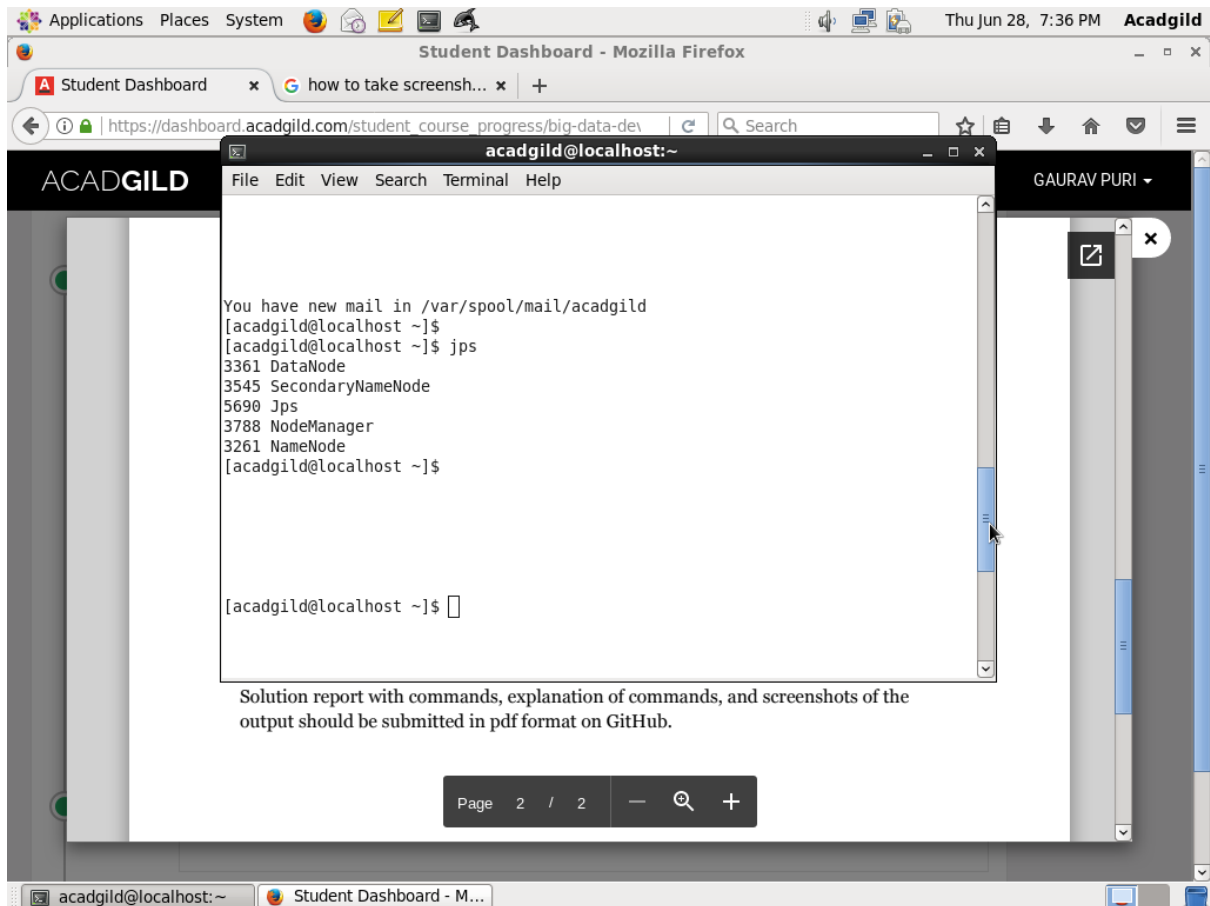
[acadgild@localhost ~]$
You have new mail in /var/spool/mail/acadgild
[acadgild@localhost ~]$
[acadgild@localhost ~]$
[acadgild@localhost ~]$
[acadgild@localhost ~]$
[acadgild@localhost ~]$
[acadgild@localhost ~]$ clear

You have new mail in /var/spool/mail/acadgild
[acadgild@localhost ~]$
[acadgild@localhost ~]$ start-all.sh
This script is Deprecated. Instead use start-dfs.sh and start-yarn.sh
18/06/28 19:34:11 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl
asses where applicable
Starting namenodes on [localhost]
localhost: namenode running as process 3261. Stop it first.
localhost: datanode running as process 3361. Stop it first.
Starting secondary namenodes [0.0.0.0]
0.0.0.0: secondarynamenode running as process 3545. Stop it first.
18/06/28 19:34:26 WARN util.NativeCodeLoader: Unable to load native-hadoop libra
ry for your platform... using builtin-java classes where applicable
starting yarn daemons
resourcemanager running as process 3452. Stop it first.
localhost: nodemanager running as process 3788. Stop it first.
[acadgild@localhost ~]$
```

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

We will use *JPS* command to see the running Hadoop daemons. JPS which means Java Process Status which is used to list all the processes that are running on Java Virtual Machine(See Attached).

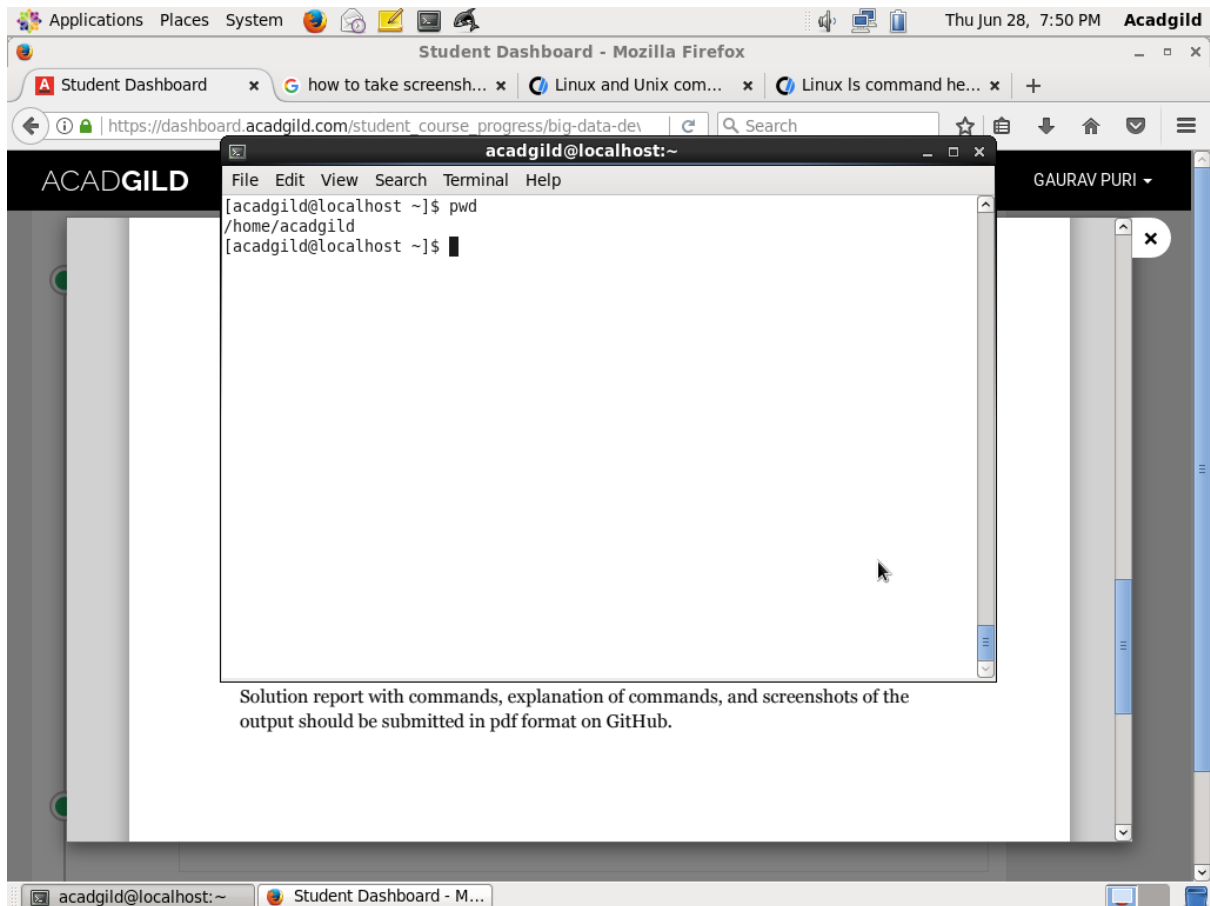
Command: *jps*



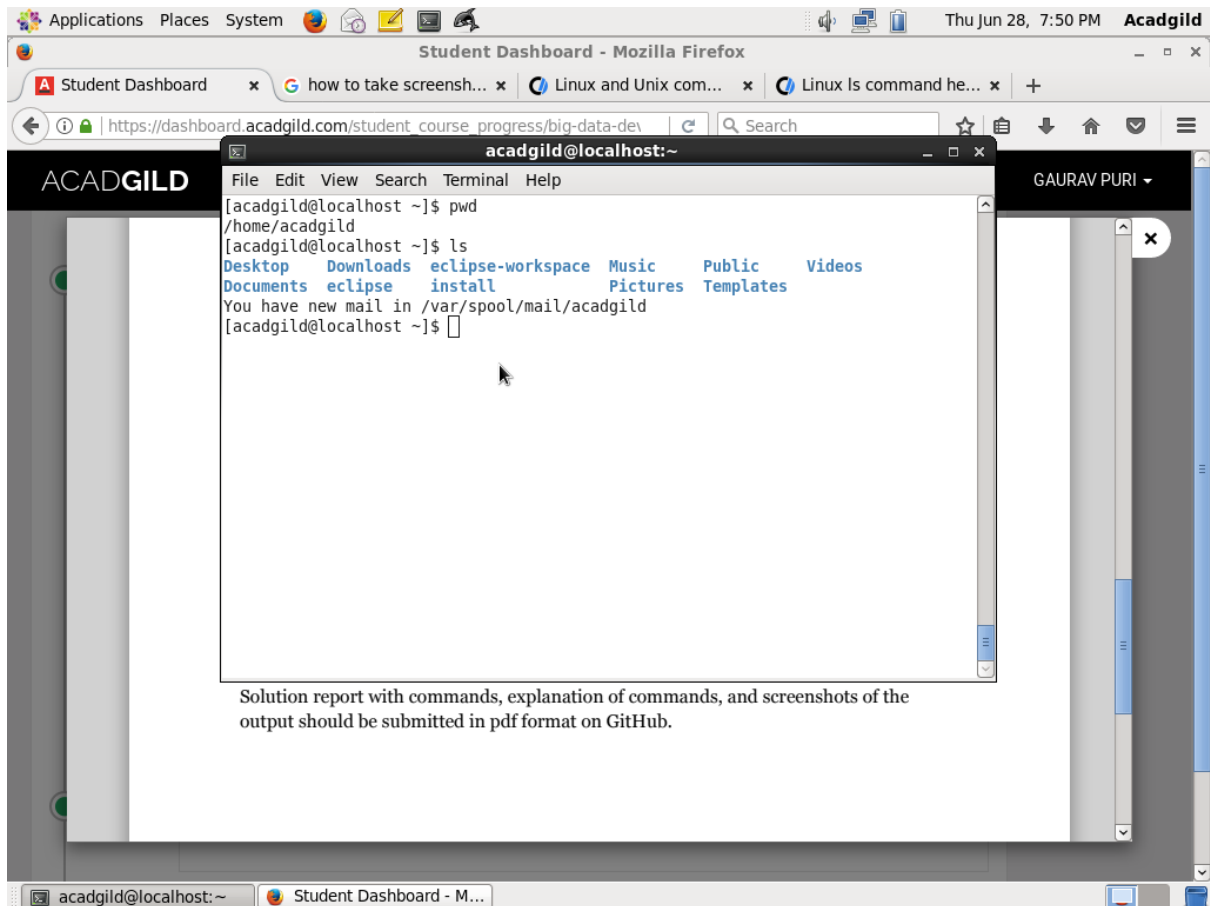
3) Run few Unix commands like `pwd`, `ls -ls`, etc.

The Commands which we used here is *pwd*, *ls*, *cd* etc.

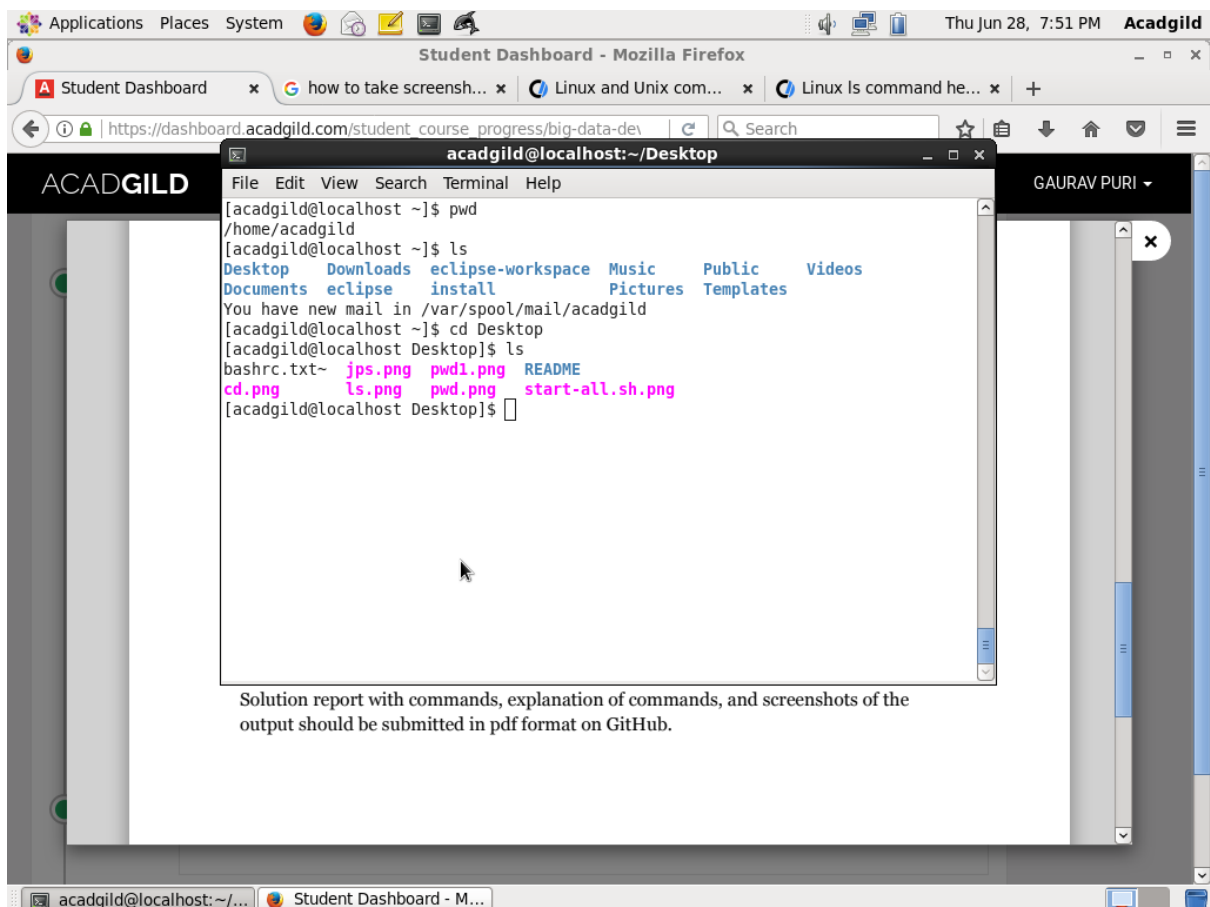
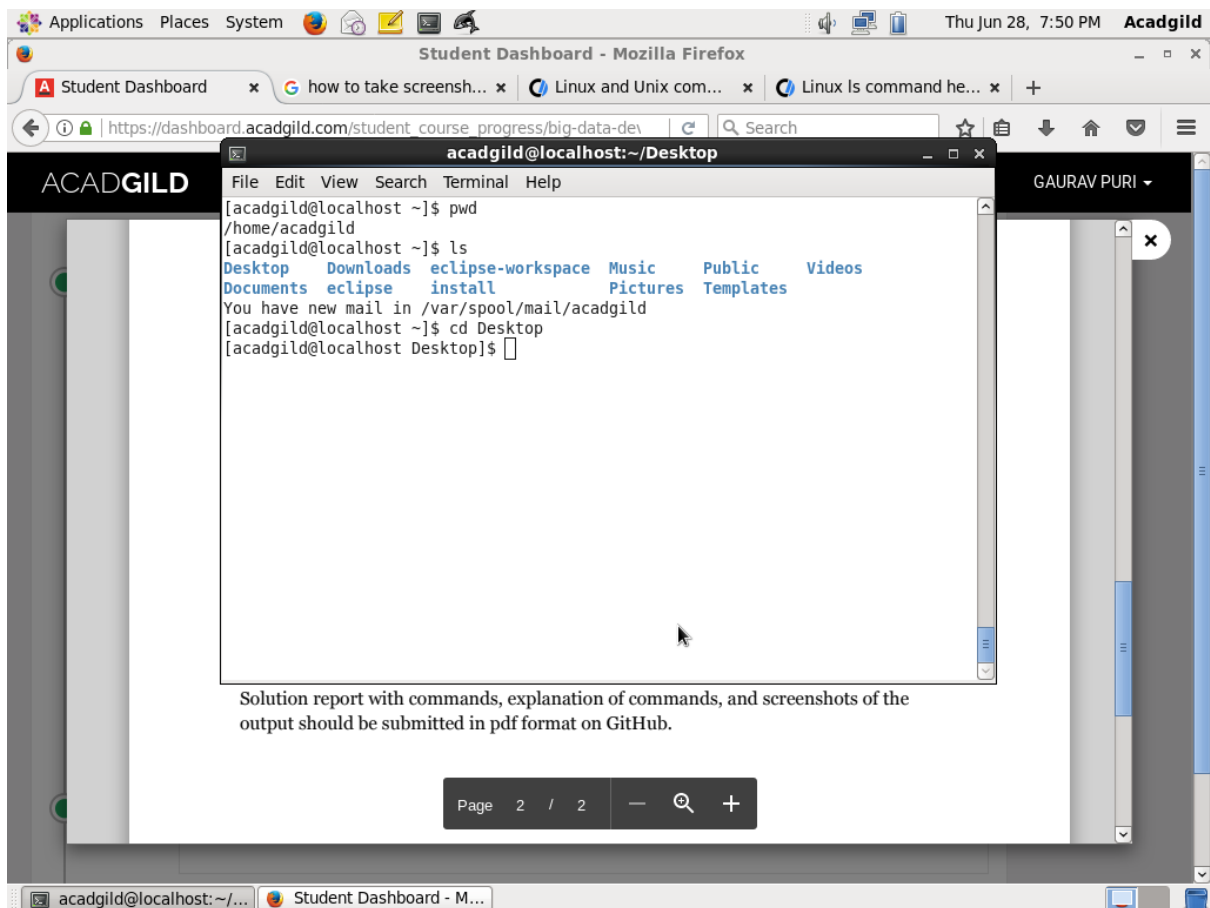
- *Pwd*: This command is basically used to know which directory we are in. It gives us the absolute path, which means the path starts from root. The Root is the base of the linux file system. It is denoted by forward slash(/). My directory is like `"/home/acadgild"` (See Attached).



- **Ls:** This command is basically used to see the list of files in that particular directory (See Attached).



- *Cd*: This command is used to change the directory or we can say that to go to other directory(See Attached).

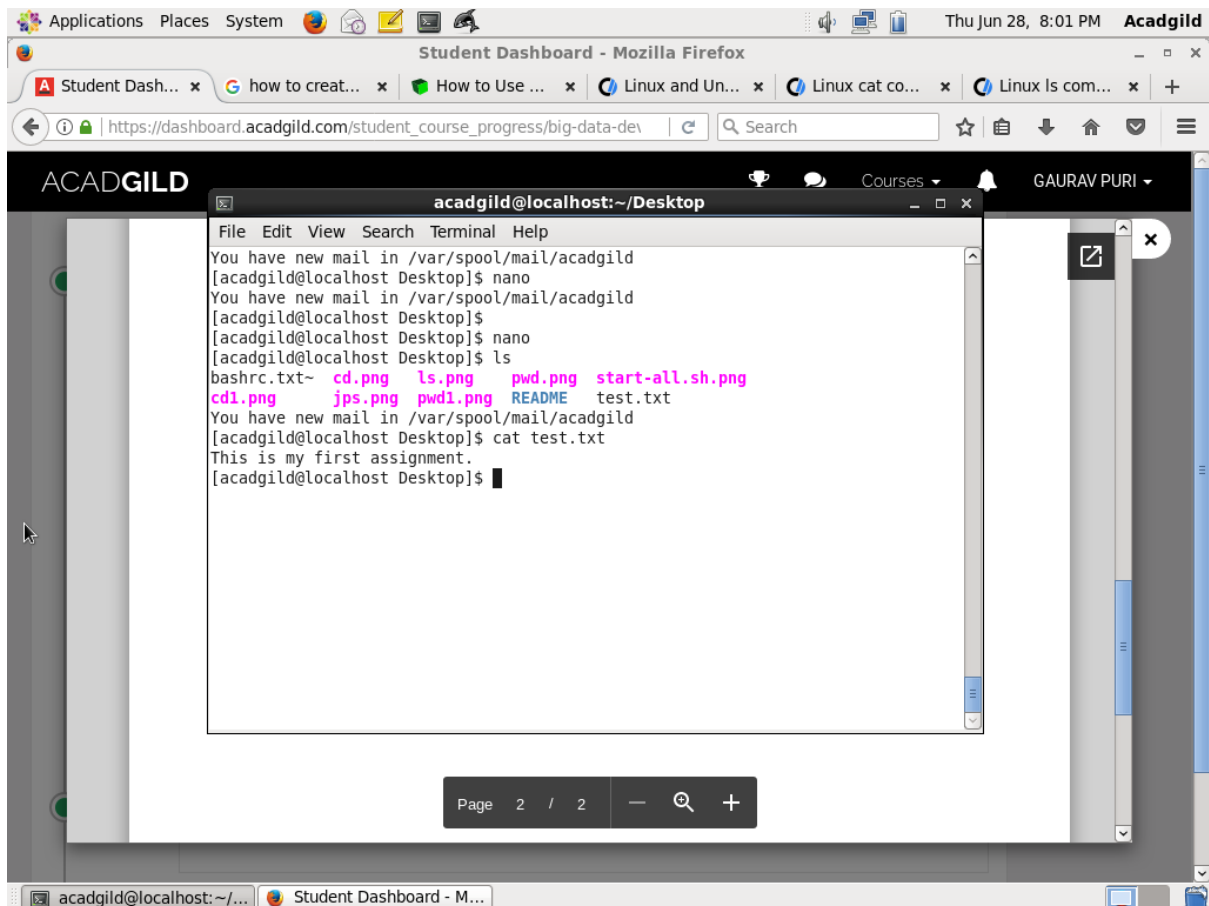


- 4) Create a file from the terminal using nano editor (example: nano test.txt), and add some content in it. Cat it to see if the content is saved.

The *nano* command is a good text editor which denotes the keywords with color. We will use it to create the files as well as edit it. We have make one file named as test.txt with nano.

Command: *nano* (To open the new file and add the text we want then save it.)

Cat: To see the content of the file in CMD.



- 5) Open the hdfs web page by typing localhost:50070 in the browser. Check all the details of the HDFS.

- Overview of HDFS.

ApplicationsPlacesSystem

Thu Jun 28, 8:02 PMAcadgild

Namenode information - Mozilla Firefox

Student Dash...Namenode infor...How to Use ...Linux and Un...Linux cat co...Linux ls com...+

localhost:50070/dfshealth.html#tab-overview

Search

HadoopOverviewDatanodesSnapshotStartup ProgressUtilities

Overview 'localhost:8020' (active)

Started:	Thu Jun 28 19:15:47 IST 2018
Version:	2.6.5, re8c9fe0b4c252caf2ebf1464220599650f119997
Compiled:	2016-10-02T23:43Z by sjlee from branch-2.6.5
Cluster ID:	CID-7b3f9bd8-f34c-4fb8-87aa-f76b6dfbd809
Block Pool ID:	BP-437583619-127.0.0.1-1517555661954

Summary

Security is off.

Safemode is off.

26 files and directories, 3 blocks = 29 total filesystem object(s).

Heap Memory used 28.58 MB of 50.51 MB Heap Memory. Max Heap Memory is 966.69 MB.

acadgild@localhost: ~/...Namenode informatio...

Applications Places System Thu Jun 28, 8:03 PM Acadgild

Namenode information - Mozilla Firefox

Student Dash... x Namenode infor... x How to Use ... x Linux and Un... x Linux cat co... x Linux ls com... x +

localhost:50070/dfshealth.html#tab-overview

non heap memory used 39.55 MB of 40.25 MB Committed non heap memory: max non heap memory is 41 B.

Configured Capacity:	17.11 GB
DFS Used:	200 KB
Non DFS Used:	11.73 GB
DFS Remaining:	5.37 GB
DFS Used%:	0%
DFS Remaining%:	31.41%
Block Pool Used:	200 KB
Block Pool Used%:	0%
DataNodes usages% (Min/Median/Max/stdDev):	0.00% / 0.00% / 0.00% / 0.00%
Live Nodes	1 (Decommissioned: 0)
Dead Nodes	0 (Decommissioned: 0)
Decommissioning Nodes	0
Number of Under-Replicated Blocks	0
Number of Blocks Pending Deletion	0
Block Deletion Start Time	6/28/2018, 7:15:47 PM

acadgild@localhost: ~/... Namenode informatio...

Applications Places System Thu Jun 28, 8:04 PM Acadgild

Namenode information - Mozilla Firefox

Student Dash... x Namenode infor... x How to Use ... x Linux and Un... x Linux cat co... x Linux ls com... x +

localhost:50070/dfshealth.html#tab-overview

Number of Blocks Pending Deletion	0
Block Deletion Start Time	6/28/2018, 7:15:47 PM

NameNode Journal Status

Current transaction ID: 334

Journal Manager	State
FileJournalManager(root=/home/acadgild/install/data/dfs/name)	EditLogFileOutputStream(/home/acadgild/install/data/dfs/name/current/edits_inprogress_00000000000000000000334)

NameNode Storage

Storage Directory	Type	State
/home/acadgild/install/data/dfs/name	IMAGE_AND_EDITS	Active

Hadoop, 2016.

Legacy UI

acadgild@localhost: ~/... Namenode informatio...

- See the Datanodes:

Datanode Information

In operation

Node	Last contact	Admin State	Capacity	Used	Non DFS Used	Remaining	Blocks	Block pool used	Failed Volumes	Version
localhost (127.0.0.1:50010)	0	In Service	17.11 GB	200 KB	11.73 GB	5.37 GB	3	200 KB (0%)	0	2.6.5

Decomissioning

Node	Last contact	Under replicated blocks	Blocks with no live replicas	Under Replicated Blocks In files under construction
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Hadoop, 2016.

Legacy UI

acadgild@localhost: ~/... Namenode informatio...

- See the Startup Progress.

ApplicationsPlacesSystem

Thu Jun 28, 8:05 PMAcadgild

Namenode information - Mozilla Firefox

Student Dash...Namenode infor...How to Use ...Linux and Un...Linux cat co...Linux ls com...+

localhost:50070/dfshealth.html#tab-startup-progress

Search

Startup Progress

Elapsed Time: 42 sec, Percent Complete: 100%

Phase	Completion	Elapsed Time
Loading fsimage /home/acadgild/install/data/dfs/name/current/fsimage_00000000000000000332 2.07 KB	100%	2 sec
inodes (0/0)	100%	
delegation tokens (0/0)	100%	
cache pools (0/0)	100%	
Loading edits	100%	0 sec
/home/acadgild/install/data/dfs/name/current/edits_00000000000000000333-00000000000000000333 1 MB (1/1)	100%	
Saving checkpoint	100%	0 sec
inodes /home/acadgild/install/data/dfs/name/current/fsimage.ckpt_00000000000000000333 (0/0)	100%	
delegation tokens /home/acadgild/install/data/dfs/name/current/fsimage.ckpt_00000000000000000333 (0/0)	100%	

acadgild@localhost: ~/...Namenode informatio...

Applications Places System Thu Jun 28, 8:06 PM Acadgild

Namenode information - Mozilla Firefox

Student Dash... x Namenode infor... x How to Use ... x Linux and Un... x Linux cat co... x Linux ls com... x +

localhost:50070/dfshealth.html#tab-startup-progress

/fsimage_00000000000000000332 2.07 KB

inodes (0/0)	100%	
delegation tokens (0/0)	100%	
cache pools (0/0)	100%	
Loading edits	100%	0 sec
/home/acadgild/install/data/dfs/name/current /edits_00000000000000000333-00000000000000000333 1 MB (1/1)	100%	
Saving checkpoint	100%	0 sec
inodes /home/acadgild/install/data/dfs/name/current/fsimage.ckpt_00000000000000000333 (0/0)	100%	
delegation tokens /home/acadgild/install/data/dfs/name/current /fsimage.ckpt_00000000000000000333 (0/0)	100%	
cache pools /home/acadgild/install/data/dfs/name/current /fsimage.ckpt_00000000000000000333 (0/0)	100%	
Safe mode	100%	36 sec
awaiting reported blocks (3/3)	100%	

Hadoop, 2016.

Legacy UI

acadgild@localhost: ~/... Namenode informatio...

- Browse the HDFS Directory.

ApplicationsPlacesSystem

Thu Jun 28, 8:07 PM

Acadgild

Browsing HDFS - Mozilla Firefox

Student Dash... xBrowsing HDFS xHow to Use ... xLinux and Un... xLinux cat co... xLinux ls com... x

localhost:50070/explorer.html#/Search

☆📁⬇️🏠🔍☰

HadoopOverviewDatanodesSnapshotStartup ProgressUtilities

Browse Directory

/Go!

Permission	Owner	Group	Size	Replication	Block Size	Name
drwxr-xr-x	acadgild	supergroup	0 B	0	0 B	sqoopout111
drwxrwx---	acadgild	supergroup	0 B	0	0 B	tmp
drwxr-xr-x	acadgild	supergroup	0 B	0	0 B	user

Hadoop, 2016.

acadgild@localhost: ~/...Browsing HDFS - Mozil...