1) Start Hadoop single node on AcadGild VM. The command is start-all.sh.

Execution:

```
[acadgild@dhcppc2 ~]$ jps
7636 Jps
[acadgild@dhcppc2 ~]$ sudo service sshd start
[sudo] password for acadgild:
You have new mail in /var/spool/mail/acadgild
[acadgild@dhcppc2 ~]$ start-all.sh
This script is Deprecated. Instead use start-dfs.sh and start-yarn.sh
18/06/08 00:05:23 WARN util.NativeCodeLoader: Unable to load native-hadoop library
for your platform... using builtin-java classes where applicable
Starting namenodes on [localhost]
localhost: starting namenode, logging to
/home/acadgild/install/hadoop/hadoop-2.6.5/logs/hadoop-acadgild-namenode-dhcppc2.ou
t
localhost: starting datanode, logging to
/home/acadgild/install/hadoop/hadoop-2.6.5/logs/hadoop-acadgild-datanode-dhcppc2.ou
t
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-secondarynamenode-d
hcppc2.out
18/06/08 00:05:58 WARN util.NativeCodeLoader: Unable to load native-hadoop library
for your platform... using builtin-java classes where applicable
starting yarn daemons
starting resourcemanager, logging to
/home/acadgild/install/hadoop/hadoop-2.6.5/logs/yarn-acadgild-resourcemanager-dhcpp
c2.out
localhost: starting nodemanager, logging to
/home/acadgild/install/hadoop/hadoop-2.6.5/logs/yarn-acadgild-nodemanager-dhcppc2.o
ut
```

Explaination:

First we check the currently running processes in Java Virtual Machine Processor
System tool (JPS). Then we will First start the Secure Shell (SSHD) servers. Then,
By entering start-all.sh, we will start all the hadoop daemon like NameNode,
DataNode,Resource Manager, YARN, etc.

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

Execution:

```
[acadgild@dhcppc2 ~]$ jps
8192 ResourceManager
8739 Jps
8052 SecondaryNameNode
7806 NameNode
You have new mail in /var/spool/mail/acadgild
```

This jps will show all the currently running Hadoop Daemon along with their process
IDs. Here, it is ResouceManager, JPS, SecondaryNameNode, etc.

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

Executions :

1.pwd - This will show present working directory path.

[acadgild@dhcppc2 ~]$ pwd
/home/acadgild
You have new mail in /var/spool/mail/acadgild

2. ls - to list all the files and directories in the current working directory.

[acadgild@dhcppc2 ~]$ ls
Desktop Documents Downloads eclipse eclipse-workspace install Music
Person.java Pictures Public Templates Videos
You have new mail in /var/spool/mail/acadgild

3. -ls - To list down all the content in any particular path :

[acadgild@dhcppc2 ~]$ ls -ls /home/acadgild/Desktop
total 44
4 drwxrwxr-x. 2 acadgild acadgild 4096 Jun 5 23:26 Assignment1
4 -rw-rw-r--. 1 acadgild acadgild 2540 Jun 8 00:23 Assignment1.doc
4 -rw-rw-r--. 1 acadgild acadgild 2059 Jun 8 00:14 Assignment1.doc~
4 -rw-rw-r--. 1 acadgild acadgild 1287 Dec 29 15:15 bashrc.txt~
4 drwxrwxr-x. 2 acadgild acadgild 4096 Jun 4 23:54 HadoopData1
4 drwx------. 3 acadgild acadgild 4096 May 6 10:53 Old Firefox Data
4 drwxrwxr-x. 2 acadgild acadgild 4096 Feb 2 12:45 README
8 -rw-rw-r--. 1 acadgild acadgild 5259 Jun 7 23:31 Sqoop_query.doc
8 -rw-rw-r--. 1 acadgild acadgild 4829 Jun 5 00:14 test.txt

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.

Execution :

[acadgild@dhcppc2 ~]$ cd /home/acadgild/Desktop
[acadgild@dhcppc2 Desktop]$ nano test.txt
[acadgild@dhcppc2 Desktop]$ cat test.txt
  GNU nano 2.0.9   File: test.txt
Modified

Hi I am new to Bigdata Hadoop.
I like working in Hadoop.
Hadoop is java based framework
It performs distributed parallel processing

[Cancelled]
^G Get Help^O WriteOut   ^R Read File^Y Prev Page   ^K Cut Text
^C Cur Pos
^X Exit   ^J Justify   ^W Where Is^V Next Page^U UnCut Text   ^T To
Spell

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

Explaination :

Typing localhost:50070 on web browser and pressing enter will navigate the browser to Hadoop webpage that contains all the basic info about HDFS and Hadoop Daemons like NameNode, DataNode, etc.

RunTime Execution on Web Browser

Hadoop

    Overview
    Datanodes
    Snapshot
    Startup Progress
    Utilities

Overview 'localhost:8020' (active)
Started: Fri Jun 08 00:05:32 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.

Safe mode is ON. The reported blocks 0 needs additional 3 blocks to reach the threshold 0.9990 of total blocks 3. The number of live datanodes 0 has reached the minimum number 0. Safe mode will be turned off automatically once the thresholds have been reached.

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

Heap Memory used 29.02 MB of 49.23 MB Heap Memory. Max Heap Memory is 966.69 MB.

Non Heap Memory used 35.41 MB of 36.5 MB Commited Non Heap Memory. Max Non Heap Memory is -1 B.
Configured Capacity: 0 B
DFS Used: 0 B
Non DFS Used: 0 B
DFS Remaining: 0 B
DFS Used%: 100%
DFS Remaining%:   0%
Block Pool Used: 0 B
Block Pool Used%: 100%
DataNodes usages% (Min/Median/Max/stdDev):   0.00% / 0.00% / 0.00% / 0.00%
Live Nodes 0 (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   6/8/2018, 12:05:32 AM
NameNode Journal Status

Current transaction ID: 340
Journal Manager   State
FileJournalManager(root=/home/acadgild/install/data/dfs/name)   EditLogFileOutputS
tream(/home/acadgild/install/data/dfs/name/current/edits_inprogress_00000000000000
0340)
NameNode Storage
Storage Directory Type State
/home/acadgild/install/data/dfs/name   IMAGE_AND_EDITS   Active

Hadoop, 2016.
Legacy UI