

Assignment Date: 13/Oct/2018

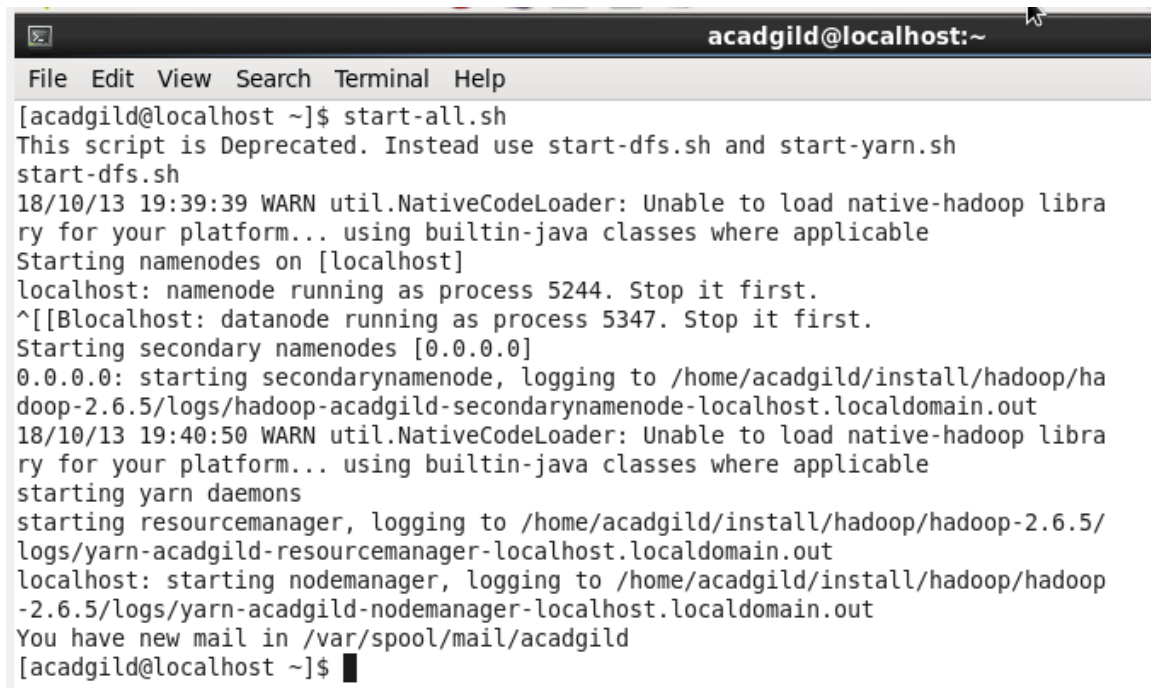
Assignment Completed: 13/Oct/2018

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

Started the node using start-dfs.sh, Below output generated.

A terminal window titled 'acadgild@localhost:~' with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal shows the execution of 'start-all.sh', which is deprecated and suggests using 'start-dfs.sh' and 'start-yarn.sh'. It then runs 'start-dfs.sh', which logs warnings about native Hadoop libraries and starts the NameNode and DataNode on localhost. It also starts secondary namenodes and yarn daemons (ResourceManager and NodeManager), logging their startup to specific files. Finally, it shows a mail notification and returns to the shell prompt.

```
[acadgild@localhost ~]$ start-all.sh
This script is Deprecated. Instead use start-dfs.sh and start-yarn.sh
start-dfs.sh
18/10/13 19:39:39 WARN util.NativeCodeLoader: Unable to load native-hadoop libra
ry for your platform... using builtin-java classes where applicable
Starting namenodes on [localhost]
localhost: namenode running as process 5244. Stop it first.
^[[Blocalhost: datanode running as process 5347. Stop it first.
Starting secondary namenodes [0.0.0.0]
0.0.0.0: starting secondarynamenode, logging to /home/acadgild/install/hadoop/ha
doop-2.6.5/logs/hadoop-acadgild-secondarynamenode-localhost.localdomain.out
18/10/13 19:40:50 WARN util.NativeCodeLoader: Unable to load native-hadoop libra
ry 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-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.

Executed JPS (Java Virtual Machine Process Status Tool.) to check all the Hadoop daemons like NameNode, DataNode, ResourceManager, NodeManager etc

```
[acadgild@localhost ~]$ jps
5347 DataNode
6291 ResourceManager
6120 SecondaryNameNode
5244 NameNode
7774 Jps
6399 NodeManager
You have new mail in /var/spool/mail/acadgild
[acadgild@localhost ~]$ █
```

3) Run few Unix commands like pwd (print work directory), ls -ls (list), created a text file using touch data.txt command. etc.

```
[acadgild@localhost ~]$ pwd
/home/acadgild
[acadgild@localhost ~]$ ls -ls
total 44
4 drwxr-xr-x. 3 acadgild acadgild 4096 Feb  2  2018 Desktop
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. 3 acadgild acadgild 4096 Jan 16  2018 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 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 ~]$ █
```

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.

Created a file called textfile.txt using command nano textfile.txt

Entered few lines and saved using ^O and exited using ^C.

Checked if the data has been saved or not using cat textfile.txt

```
acadgild@localhost:~  
File Edit View Search Terminal Help  
[acadgild@localhost ~]$ nano textfile.txt  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost ~]$ cat textfile.txt  
My name is Shashank Dixit. I am learning Hadoop and Spark.  
I want to be a Hadoop Developer.  
cat textfile.txt  
[acadgild@localhost ~]$
```

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

Accessed the hdfs using localhost:50070 in thr browser

Overview 'localhost:8020' (active)

Started:	Sat Oct 13 19:38:44 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

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Summary

Security is off.
Safemode is off.
26 files and directories, 3 blocks = 29 total filesystem object(s).
Heap Memory used 36.33 MB of 49.23 MB Heap Memory. Max Heap Memory is 966.69 MB.
Non Heap Memory used 41.42 MB of 42.44 MB Committed Non Heap Memory. Max Non Heap Memory is -1 B.

Configured Capacity:	17.11 GB
DFS Used:	200 KB
Non DFS Used:	10.99 GB
DFS Remaining:	6.12 GB
DFS Used%:	0%
DFS Remaining%:	35.76%
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	10/13/2018, 7:38:44 PM

NameNode Journal Status

Current transaction ID: 340	
Journal Manager	State
FileJournalManager(root=/home/acadgild/install/data/dfs/name)	EditLogFileOutputStream(/home/acadgild/install/data/dfs/name/current/edits_inprogress_0000000000000000340)

NameNode Storage

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

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	10.99 GB	6.12 GB	3	200 KB (0%)	0	2.6.5

Decommissioning

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

In the same fashion also checked other attributes of the system like:

DataNode

Snapshot

Startup Progress, etc.