

LARGE SCALE DATA PROCESSING (CSE 3025)

WIN SEMESTER 2017-18

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LAB-1

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HDFS COMMANDS

❖ Starting the hadoop

```
ponny@ubuntu:~$ start-all.sh
Warning: $HADOOP_HOME is deprecated.

namenode running as process 3702. Stop it first.
localhost: datanode running as process 3984. Stop it first.
localhost: secondarynamenode running as process 4240. Stop it first.
jobtracker running as process 4324. Stop it first.
localhost: tasktracker running as process 4575. Stop it first.
ponny@ubuntu:~$
```

❖ JPS

```
ponny@ubuntu:~$ jps
4575 TaskTracker
2763
3984 DataNode
4240 SecondaryNameNode
4324 JobTracker
3702 NameNode
7478 Jps
ponny@ubuntu:~$
```

❖ Stopping the hadoop

```
ponny@ubuntu:~$ stop-all.sh
Warning: $HADOOP_HOME is deprecated.

stopping jobtracker
localhost: stopping tasktracker
stopping namenode
localhost: stopping datanode
localhost: stopping secondarynamenode
ponny@ubuntu:~$
```

1. Print the Hadoop version.

```
ponny@ubuntu: ~
ponny@ubuntu:~$ hadoop version
Warning: $HADOOP_HOME is deprecated.

Hadoop 1.0.4
Subversion https://svn.apache.org/repos/asf/hadoop/common/branches/branch-1.0 -r 1393
290
Compiled by hortonfo on Wed Oct 3 05:13:58 UTC 2012
From source with checksum fe2baea87c4c81a2c505767f3f9b71f4
ponny@ubuntu:~$
```

2. List the contents of the root directory in HDFS.

```
ponny@ubuntu:~$ hadoop fs -ls /
Warning: $HADOOP_HOME is deprecated.

Found 7 items
drwxr-xr-x - ponny supergroup 0 2017-09-06 10:00 /ankit
drwxr-xr-x - ponny supergroup 0 2017-09-06 09:30 /app
drwxr-xr-x - ponny supergroup 0 2017-12-04 12:39 /lw
drwxr-xr-x - ponny supergroup 0 2017-09-19 12:59 /mag
drwxr-xr-x - ponny supergroup 0 2017-09-19 13:21 /output
drwxr-xr-x - ponny supergroup 0 2017-09-19 12:57 /outuput
drwxr-xr-x - ponny supergroup 0 2017-09-13 09:38 /user
ponny@ubuntu:~$
```

3. Run a DFS filesystem checking utility.

```
ponny@ubuntu:~$ hadoop fsck -/
Warning: $HADOOP_HOME is deprecated.

FSCK started by ponny from /127.0.0.1 for path / at Mon Dec 04 12:59:57 IST 2017
..
/app/hadoop/tmp/mapred/staging/ponny/.staging/job_201402270955_0001/job.jar: Under r
eplicated blk_-6731095008437494174_1035. Target Replicas is 10 but found 1 replica(s)
.
/app/hadoop/tmp/mapred/staging/ponny/.staging/job_201403030953_0001/job.jar: Under r
eplicated blk_-6102112896490545596_1038. Target Replicas is 10 but found 1 replica(s)
.
/app/hadoop/tmp/mapred/staging/ponny/.staging/job_201403060944_0002/job.jar: Under r
eplicated blk_5494939499954923000_1060. Target Replicas is 10 but found 1 replica(s).
.
/app/hadoop/tmp/mapred/staging/ponny/.staging/job_201502161451_0009/job.jar: Under r
eplicated blk_7882368787221602709_1181. Target Replicas is 10 but found 1 replica(s).
.
/app/hadoop/tmp/mapred/staging/ponny/.staging/job_201502181636_0001/job.jar: Under r
eplicated blk_7159111196186240880_1366. Target Replicas is 10 but found 1 replica(s).
.
/app/hadoop/tmp/mapred/staging/ponny/.staging/job_201502181636_0003/job.jar: Under r
eplicated blk_7804102083867562501_1376. Target Replicas is 10 but found 1 replica(s).
.
/app/hadoop/tmp/mapred/staging/ponny/.staging/job_201502181636_0004/job.jar: Under r
eplicated blk_356007764422860402_1377. Target Replicas is 10 but found 1 replica(s).
.....Status: HEALTHY
Total size:      135511 B
Total dirs:      31
Total files:      23
Total blocks (validated):      20 (avg. block size 6775 B)
Minimally replicated blocks:    20 (100.0 %)
Over-replicated blocks:         0 (0.0 %)
Under-replicated blocks:        7 (35.0 %)
Mis-replicated blocks:          0 (0.0 %)
Default replication factor:     1
Average block replication:       1.0
Corrupt blocks:                  0
Missing replicas:                63 (315.0 %)
Number of data-nodes:           1
Number of racks:                 1
FSCK ended at Mon Dec 04 12:59:57 IST 2017 in 8 milliseconds

The filesystem under path '/' is HEALTHY
ponny@ubuntu:~$
```

4. Run a cluster balancing utility.

```
ponny@ubuntu:~$ hadoop balancer
Warning: $HADOOP_HOME is deprecated.

Time Stamp          Iteration#  Bytes Already Moved  Bytes Left To Move  Bytes B
eing Moved
17/12/04 13:02:26 INFO net.NetworkTopology: Adding a new node: /default-rack/127.0.0.
1:50010
17/12/04 13:02:26 INFO balancer.Balancer: 0 over utilized nodes:
17/12/04 13:02:26 INFO balancer.Balancer: 1 under utilized nodes: 127.0.0.1:50010
The cluster is balanced. Exiting...
Balancing took 228.0 milliseconds
ponny@ubuntu:~$
```

5. Creating a New directory.

```
ponny@ubuntu:~$ hadoop fs -mkdir po
Warning: $HADOOP_HOME is deprecated.

ponny@ubuntu:~$
```

6. Add a sample text file from the local directory.

```
ponny@ubuntu:~$ hadoop fs -put /home/ponny/Desktop/hello.txt /po
Warning: $HADOOP_HOME is deprecated.

ponny@ubuntu:~$
```

7. List the contents of the new directory.

```
ponny@ubuntu:~$ fs -ls /po
Warning: $HADOOP_HOME is deprecated.

Found 1 items
-rw-r--r--    1 ponny supergroup      13 2017-12-04 13:10 /po
ponny@ubuntu:~$
```