

Lab 6 Hadoop HDFS

1. mkdir

Command: `hdfs dfs -mkdir /abc`

Description: Creates a directory /abc in HDFS.

2. ls

Command: `hadoop fs -ls /Hadoop`

Description: Lists contents of the /Hadoop directory with details like permissions, owner, size, and modification date.

3. put

Command: `hdfs dfs -put /home/hduser/Desktop/Welcome.txt /abc/WC.txt`

Description: Copies Welcome.txt from the local file system to HDFS path /abc/WC.txt.

To view the file contents in HDFS, use:

Command: `hdfs dfs -cat /abc/WC.txt`

4. copyFromLocal

Command: `hdfs dfs -copyFromLocal /home/hduser/Desktop/Welcome.txt /abc/WC.txt`

Description: Similar to put, but only accepts local file paths as source.

To view the copied file's contents:

Command: `hdfs dfs -cat /abc/WC2.txt`

5. get

Command: `hdfs dfs -get /abc/WC.txt /home/hduser/Downloads/WWC.txt`

Description: Downloads WC.txt from HDFS to the local path /home/hduser/Downloads/WWC.txt.

To merge multiple HDFS files into one local file:

Command: `hdfs dfs -getmerge /abc/WC.txt /abc/WC2.txt /home/hduser/Desktop/Merge.txt`

To check ACLs of a directory:

Command: `hadoop fs -getfacl /abc/`

6. copyToLocal

Command: `hdfs dfs -copyToLocal /abc/WC.txt /home/hduser/Desktop`

Description: Similar to get, but destination must be a local file path.

7. cat

Command: `hdfs dfs -cat /abc/WC.txt`

Description: Displays the contents of the file WC.txt in the terminal.

8. mv

Command: `hadoop fs -mv /abc /FFF`

Description: Moves /abc directory in HDFS to /FFF.

9. cp

Command: `hadoop fs -cp /CSE/ /LLL`

Description: Copies contents from /CSE/ to /LLL within HDFS.

Screenshots

```
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~$ su hduser
su: user hduser does not exist or the user entry does not contain all the required fields
```

```
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~$ cd hadoop
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop$ cd sbin
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ ./start-dfs.sh
Starting namenodes on [localhost]
localhost: namenode is running as process 4678. Stop it first and ensure /tmp/hadoop-hadoop-namenode.pid file is empty before retry.
Starting datanodes
localhost: datanode is running as process 4865. Stop it first and ensure /tmp/hadoop-hadoop-datanode.pid file is empty before retry.
Starting secondary namenodes [bmscecse-HP-Elite-Tower-800-G9-Desktop-PC]
bmscecse-HP-Elite-Tower-800-G9-Desktop-PC: secondarynamenode is running as process 5097. Stop it first and ensure /tmp/hadoop-hadoop-secondarynamenode.pid file is empty before retry.
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ ./start-yarn.sh
Starting resourcemanager
resourcemanager is running as process 5424. Stop it first and ensure /tmp/hadoop-hadoop-resourcemanager.pid file is empty before retry.
Starting nodemanagers
localhost: nodemanager is running as process 5580. Stop it first and ensure /tmp/hadoop-hadoop-nodemanager.pid file is empty before retry.
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ jps
5424 ResourceManager
4865 DataNode
9410 Jps
4678 NameNode
5097 SecondaryNameNode
5580 NodeManager
```

```
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~$ cd Desktop
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/Desktop$ nano file.txt
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/Desktop$ hadoop fs -ls /
Found 5 items
drwxr-xr-x - hadoop supergroup          0 2024-05-13 14:51 /Lab05
drwxr-xr-x - hadoop supergroup          0 2024-05-14 15:01 /abc
drwxr-xr-x - hadoop supergroup          0 2025-04-15 14:15 /clear
drwxr-xr-x - hadoop supergroup          0 2024-05-13 14:40 /test_Lab05
drwxr-xr-x - hadoop supergroup          0 2025-04-15 14:17 /xyz
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/Desktop$ cd ..
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~$ cd hadoop
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop$ cd ..
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~$ hadoop fs -ls /
Found 5 items
drwxr-xr-x - hadoop supergroup          0 2024-05-13 14:51 /Lab05
drwxr-xr-x - hadoop supergroup          0 2024-05-14 15:01 /abc
drwxr-xr-x - hadoop supergroup          0 2025-04-15 14:15 /clear
drwxr-xr-x - hadoop supergroup          0 2024-05-13 14:40 /test_Lab05
drwxr-xr-x - hadoop supergroup          0 2025-04-15 14:17 /xyz
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~$ hadoop fs -mkdir /uzairdir
```

```
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~$ hadoop fs -copyFromLocal /home/hadoop/Desktop/file.txt /uzairdir/test.txt
```