

HDFS Commands

1) Listing Directory Contents

hadoop fs -ls /

Display all files and folders in the HDFS root

```
cloudera@cloudera-vm: ~/dezyre
File Edit View Search Terminal Help
cloudera@cloudera-vm:~/dezyre$ hadoop fs -ls /
Found 4 items
-rw-r--r--  1 cloudera supergroup      62 2014-03-20 01:44 /employee.txt
drwxrwxrwx  - hue      supergroup      0 2011-04-01 17:25 /tmp
drwxr-xr-x  - hue      supergroup      0 2011-04-08 16:48 /user
drwxr-xr-x  - mapred   supergroup      0 2014-03-19 00:59 /var
cloudera@cloudera-vm:~/dezyre$
```

hadoop fs -ls /user

Display all files and folders in the HDFS /user folder

```
cloudera@cloudera-vm: ~/dezyre
File Edit View Search Terminal Help
cloudera@cloudera-vm:~/dezyre$ hadoop fs -ls /user
Found 2 items
drwxr-xr-x  - cloudera supergroup      0 2011-04-08 16:48 /user/cloudera
drwxr-xr-x  - hue      supergroup      0 2011-04-01 17:25 /user/hive
cloudera@cloudera-vm:~/dezyre$
```

2) Create a directory

hadoop fs -mkdir dezyre

Creates a directory **dezyre** in the root of HDFS

```
cloudera@cloudera-vm: ~/dezyre
File Edit View Search Terminal Help
cloudera@cloudera-vm:~/dezyre$ hadoop fs -mkdir /dezyre
cloudera@cloudera-vm:~/dezyre$ hadoop fs -ls /
Found 5 items
drwxr-xr-x  - cloudera supergroup      0 2014-03-20 02:21 /dezyre
-rw-r--r--  1 cloudera supergroup     62 2014-03-20 01:44 /employee.txt
drwxrwxrwx  - hue supergroup          0 2011-04-01 17:25 /tmp
drwxr-xr-x  - hue supergroup          0 2011-04-08 16:48 /user
drwxr-xr-x  - mapred supergroup        0 2014-03-19 00:59 /var
cloudera@cloudera-vm:~/dezyre$
```

3) Copy a file

hadoop fs -cp /employee.txt /dezyre/

Copies the file employee.txt from root folder to dezyre folder

```
cloudera@cloudera-vm: ~/dezyre
File Edit View Search Terminal Help
cloudera@cloudera-vm:~/dezyre$ hadoop fs -ls /
Found 5 items
drwxr-xr-x  - cloudera supergroup      0 2014-03-20 02:21 /dezyre
-rw-r--r--  1 cloudera supergroup     62 2014-03-20 01:44 /employee.txt
drwxrwxrwx  - hue supergroup          0 2011-04-01 17:25 /tmp
drwxr-xr-x  - hue supergroup          0 2011-04-08 16:48 /user
drwxr-xr-x  - mapred supergroup        0 2014-03-19 00:59 /var
cloudera@cloudera-vm:~/dezyre$ hadoop fs -cp /employee.txt /dezyre/
cloudera@cloudera-vm:~/dezyre$ hadoop fs -ls /dezyre/
Found 1 items
-rw-r--r--  1 cloudera supergroup     62 2014-03-20 04:40 /dezyre/employee.
txt
cloudera@cloudera-vm:~/dezyre$
```

4) Rename a file

hadoop fs -mv /employee.txt /newemployee.txt

Renames file employee.txt to newemployee.txt

```
cloudera@cloudera-vm: ~/dezyre
File Edit View Search Terminal Help
cloudera@cloudera-vm:~/dezyre$ hadoop fs -ls /
Found 5 items
drwxr-xr-x  - cloudera supergroup      0 2014-03-20 04:40 /dezyre
-rw-r--r--  1 cloudera supergroup     62 2014-03-20 01:44 /employee.txt
drwxrwxrwx  - hue      supergroup      0 2011-04-01 17:25 /tmp
drwxr-xr-x  - hue      supergroup      0 2011-04-08 16:48 /user
drwxr-xr-x  - mapred   supergroup      0 2014-03-19 00:59 /var
cloudera@cloudera-vm:~/dezyre$ hadoop fs -mv /employee.txt /newemployee.txt
cloudera@cloudera-vm:~/dezyre$ hadoop fs -ls /
Found 5 items
drwxr-xr-x  - cloudera supergroup      0 2014-03-20 04:40 /dezyre
-rw-r--r--  1 cloudera supergroup     62 2014-03-20 01:44 /newemployee.txt
drwxrwxrwx  - hue      supergroup      0 2011-04-01 17:25 /tmp
drwxr-xr-x  - hue      supergroup      0 2011-04-08 16:48 /user
drwxr-xr-x  - mapred   supergroup      0 2014-03-19 00:59 /var
cloudera@cloudera-vm:~/dezyre$
```

5) Move file from one directory to another

hadoop fs -mv /newemployee.txt /dezyre/employee.txt

Moves the file newemployee.txt from current directory into subdirectory dezyre with name employee.txt - newemployee.txt will no longer exist in the current directory

```
cloudera@cloudera-vm: ~/dezyre
File Edit View Search Terminal Help
cloudera@cloudera-vm:~/dezyre$ hadoop fs -mv /newemployee.txt /dezyre/employee.t
xt
cloudera@cloudera-vm:~/dezyre$ hadoop fs -ls /dezyre
Found 1 items
-rw-r--r--  1 cloudera supergroup      62 2014-03-20 01:44 /dezyre/employee.
txt
cloudera@cloudera-vm:~/dezyre$
```

6) Delete a file/directory

hadoop fs -rm /dezyre/employee.txt

Deletes file employee.txt from dezyre folder

```
cloudera@cloudera-vm: ~/dezyre
File Edit View Search Terminal Help
cloudera@cloudera-vm:~/dezyre$ hadoop fs -ls /dezyre
Found 2 items
-rw-r--r--  1 cloudera supergroup      62 2014-03-20 01:44 /dezyre/employee.
txt
-rw-r--r--  1 cloudera supergroup      62 2014-03-20 04:53 /dezyre/first.txt
cloudera@cloudera-vm:~/dezyre$ hadoop fs -rm /dezyre/employee.txt
Deleted hdfs://localhost/dezyre/employee.txt
cloudera@cloudera-vm:~/dezyre$
```

hadoop fs -rmr /dezyre/temp

Deletes temp directory from dezyre folder in HDFS

```
cloudera@cloudera-vm: ~/dezyre
File Edit View Search Terminal Help
cloudera@cloudera-vm:~/dezyre$ hadoop fs -ls /dezyre
Found 4 items
-rw-rw-rw- 1 cloudera cloudera 62 2014-04-04 04:15 /dezyre/emp.txt
-rw-rw-rw- 1 cloudera cloudera 62 2014-03-20 04:53 /dezyre/first.txt
-rw-rw-rw- 1 cloudera cloudera 62 2014-03-20 05:10 /dezyre/sales.txt
drwxr-xr-x - cloudera cloudera 0 2014-04-04 04:41 /dezyre/temp
cloudera@cloudera-vm:~/dezyre$
cloudera@cloudera-vm:~/dezyre$
cloudera@cloudera-vm:~/dezyre$ hadoop fs -rmr /dezyre/temp
Deleted hdfs://localhost/dezyre/temp
cloudera@cloudera-vm:~/dezyre$
cloudera@cloudera-vm:~/dezyre$ hadoop fs -ls /dezyre
Found 3 items
-rw-rw-rw- 1 cloudera cloudera 62 2014-04-04 04:15 /dezyre/emp.txt
-rw-rw-rw- 1 cloudera cloudera 62 2014-03-20 04:53 /dezyre/first.txt
-rw-rw-rw- 1 cloudera cloudera 62 2014-03-20 05:10 /dezyre/sales.txt
cloudera@cloudera-vm:~/dezyre$
```

7) Viewing files

cat file1

Will display contents of file1 on screen

```
cloudera@cloudera-vm: ~/dezyre
File Edit View Search Terminal Help
cloudera@cloudera-vm:~/dezyre$ hadoop fs -cat /dezyre/first.txt
1,john,50000,Engineer
2,Sarah, 45000, HR
3, Tom, 40000, Sales
cloudera@cloudera-vm:~/dezyre$
```

8) CopyFromLocal

hadoop fs -copyFromLocal sales.txt /dezyre/sales.txt

Will copy the file sales.txt from the local file system into dezyre folder in HDFS file system

```
cloudera@cloudera-vm: ~/dezyre
File Edit View Search Terminal Help
cloudera@cloudera-vm:~/dezyre$ ls
employee.txt  sales.txt
cloudera@cloudera-vm:~/dezyre$ hadoop fs -copyFromLocal sales.txt /dezyre/sales.
txt
cloudera@cloudera-vm:~/dezyre$ hadoop fs -ls /dezyre
Found 2 items
-rw-r--r--  1 cloudera supergroup      62 2014-03-20 04:53 /dezyre/first.txt
-rw-r--r--  1 cloudera supergroup      62 2014-03-20 05:10 /dezyre/sales.txt
cloudera@cloudera-vm:~/dezyre$
```

9) CopyToLocal

hadoop fs -copyToLocal /dezyre/first.txt localfirst.txt

Will copy the file first.txt from HDFS into the current local file system with the name localfirst.txt

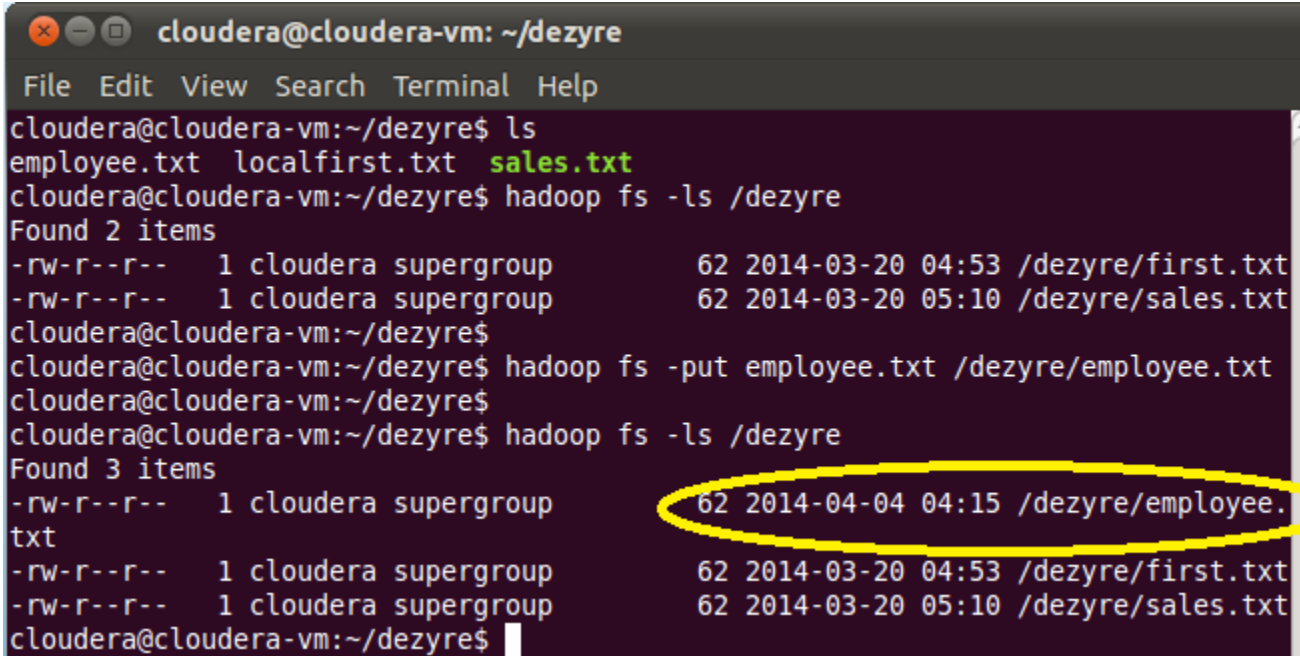
```
cloudera@cloudera-vm: ~/dezyre
File Edit View Search Terminal Help
cloudera@cloudera-vm:~/dezyre$ ls
employee.txt  sales.txt
cloudera@cloudera-vm:~/dezyre$ hadoop fs -copyToLocal /dezyre/first.txt localfir
st.txt
cloudera@cloudera-vm:~/dezyre$ ls
employee.txt  localfirst.txt  sales.txt
cloudera@cloudera-vm:~/dezyre$
```

10) Put

Similar to copyFromLocal

hadoop fs -put employee.txt /dezyre/employee.txt

Will copy the file employee.txt from local file system into HDFS



```
cloudera@cloudera-vm: ~/dezyre
File Edit View Search Terminal Help
cloudera@cloudera-vm:~/dezyre$ ls
employee.txt localfirst.txt sales.txt
cloudera@cloudera-vm:~/dezyre$ hadoop fs -ls /dezyre
Found 2 items
-rw-r--r--  1 cloudera supergroup      62 2014-03-20 04:53 /dezyre/first.txt
-rw-r--r--  1 cloudera supergroup      62 2014-03-20 05:10 /dezyre/sales.txt
cloudera@cloudera-vm:~/dezyre$
cloudera@cloudera-vm:~/dezyre$ hadoop fs -put employee.txt /dezyre/employee.txt
cloudera@cloudera-vm:~/dezyre$
cloudera@cloudera-vm:~/dezyre$ hadoop fs -ls /dezyre
Found 3 items
-rw-r--r--  1 cloudera supergroup      62 2014-04-04 04:15 /dezyre/employee.
txt
-rw-r--r--  1 cloudera supergroup      62 2014-03-20 04:53 /dezyre/first.txt
-rw-r--r--  1 cloudera supergroup      62 2014-03-20 05:10 /dezyre/sales.txt
cloudera@cloudera-vm:~/dezyre$
```

11) Get

Similar to copyToLocal

hadoop fs -get /dezyre/first.txt first.txt

Will copy the file first.txt from HDFS to local file system

```
cloudera@cloudera-vm: ~/dezyre
File Edit View Search Terminal Help
cloudera@cloudera-vm:~/dezyre$ ls
employee.txt localfirst.txt sales.txt
cloudera@cloudera-vm:~/dezyre$ hadoop fs -ls /dezyre
Found 3 items
-rw-r--r--  1 cloudera supergroup      62 2014-04-04 04:15 /dezyre/employee.
txt
-rw-r--r--  1 cloudera supergroup      62 2014-03-20 04:53 /dezyre/first.txt
-rw-r--r--  1 cloudera supergroup      62 2014-03-20 05:10 /dezyre/sales.txt
cloudera@cloudera-vm:~/dezyre$ hadoop fs -get /dezyre/first.txt first.txt
cloudera@cloudera-vm:~/dezyre$
cloudera@cloudera-vm:~/dezyre$ ls
employee.txt first.txt localfirst.txt sales.txt
cloudera@cloudera-vm:~/dezyre$ ls -ltr
total 16
-rwxrwxrwx 1 cloudera  dezyre_group 62 2014-03-20 01:38 sales.txt
-rw-r--r-- 1 dezyre_user dezyre_group 62 2014-03-20 01:38 employee.txt
-rw-r--r-- 1 cloudera  cloudera     62 2014-03-20 05:16 localfirst.txt
-rw-r--r-- 1 cloudera  cloudera     62 2014-04-04 04:19 first.txt
cloudera@cloudera-vm:~/dezyre$
```


12) Display size of files

hadoop fs -du /dezyre/*

Will display the size of files

```
cloudera@cloudera-vm: ~/dezyre
File Edit View Search Terminal Help
cloudera@cloudera-vm:~/dezyre$ hadoop fs -du /dezyre/*
Found 3 items
62      hdfs://localhost/dezyre/employee.txt
62      hdfs://localhost/dezyre/first.txt
62      hdfs://localhost/dezyre/sales.txt
cloudera@cloudera-vm:~/dezyre$
```

13) Change group of file/directory

hadoop fs -chgrp -R cloudera /dezyre/

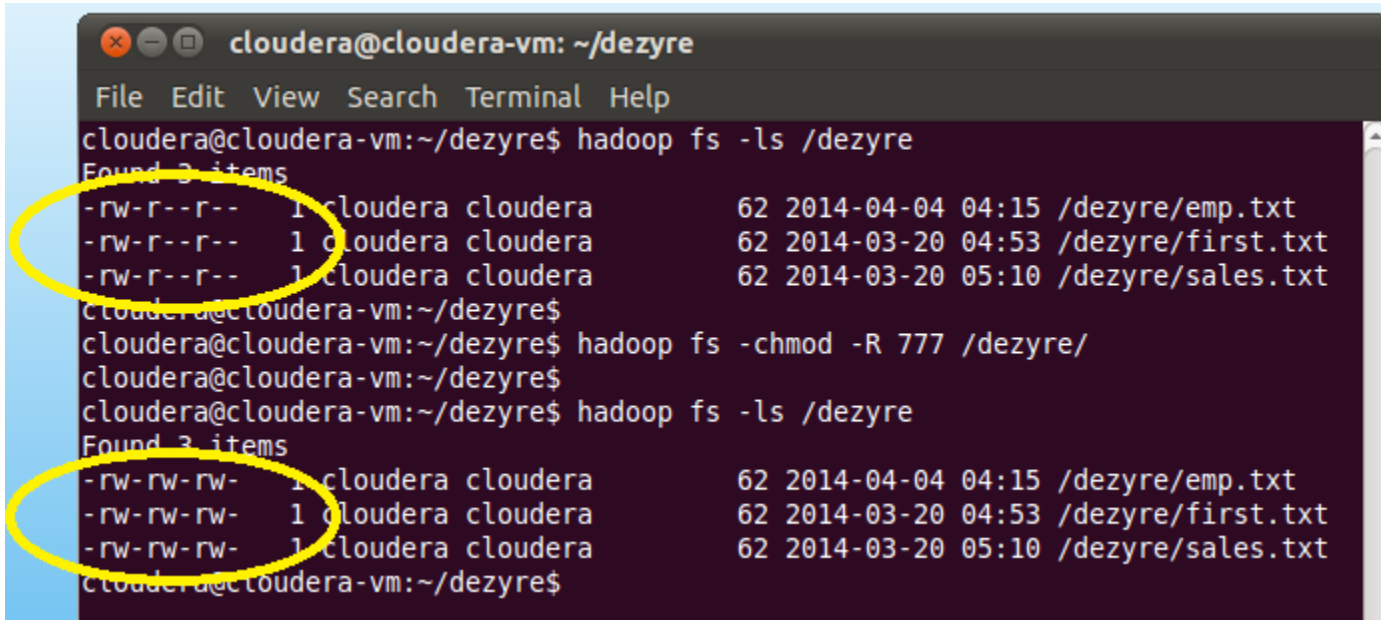
Will change the group from supergroup to cloudera

```
cloudera@cloudera-vm: ~/dezyre
File Edit View Search Terminal Help
cloudera@cloudera-vm:~/dezyre$ hadoop fs -ls /dezyre
Found 3 items
-rw-r--r--  1 cloudera supergroup      62 2014-04-04 04:15 /dezyre/emp.txt
-rw-r--r--  1 cloudera supergroup      62 2014-03-20 04:53 /dezyre/first.txt
-rw-r--r--  1 cloudera supergroup      62 2014-03-20 05:10 /dezyre/sales.txt
cloudera@cloudera-vm:~/dezyre$
cloudera@cloudera-vm:~/dezyre$ hadoop fs -chgrp -R cloudera /dezyre/
cloudera@cloudera-vm:~/dezyre$
cloudera@cloudera-vm:~/dezyre$ hadoop fs -ls /dezyre
Found 3 items
-rw-r--r--  1 cloudera cloudera        62 2014-04-04 04:15 /dezyre/emp.txt
-rw-r--r--  1 cloudera cloudera        62 2014-03-20 04:53 /dezyre/first.txt
-rw-r--r--  1 cloudera cloudera        62 2014-03-20 05:10 /dezyre/sales.txt
cloudera@cloudera-vm:~/dezyre$
```

14) Change permissions of file/directory

hadoop fs -chmod -R 777 /dezyre/

You will see initially the files have read permission for other users - we will change to write permission



The screenshot shows a terminal window titled 'cloudera@cloudera-vm: ~/dezyre'. It displays the execution of 'hadoop fs -ls /dezyre' twice. In the first execution, the permissions for three files are '-rw-r--r--'. In the second execution, after running 'hadoop fs -chmod -R 777 /dezyre/', the permissions have changed to '-rw-rw-rw-'. Yellow circles highlight the permission strings in both listings.

```
cloudera@cloudera-vm: ~/dezyre
File Edit View Search Terminal Help
cloudera@cloudera-vm:~/dezyre$ hadoop fs -ls /dezyre
Found 3 items
-rw-r--r-- 1 cloudera cloudera 62 2014-04-04 04:15 /dezyre/emp.txt
-rw-r--r-- 1 cloudera cloudera 62 2014-03-20 04:53 /dezyre/first.txt
-rw-r--r-- 1 cloudera cloudera 62 2014-03-20 05:10 /dezyre/sales.txt
cloudera@cloudera-vm:~/dezyre$
cloudera@cloudera-vm:~/dezyre$ hadoop fs -chmod -R 777 /dezyre/
cloudera@cloudera-vm:~/dezyre$
cloudera@cloudera-vm:~/dezyre$ hadoop fs -ls /dezyre
Found 3 items
-rw-rw-rw- 1 cloudera cloudera 62 2014-04-04 04:15 /dezyre/emp.txt
-rw-rw-rw- 1 cloudera cloudera 62 2014-03-20 04:53 /dezyre/first.txt
-rw-rw-rw- 1 cloudera cloudera 62 2014-03-20 05:10 /dezyre/sales.txt
cloudera@cloudera-vm:~/dezyre$
```