

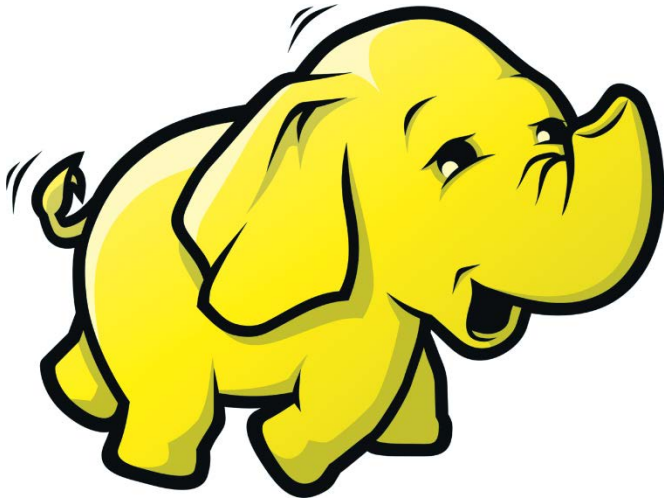
# Creating, Manipulating and Retrieving HDFS Files



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# Overview



Actions in HDFS

Explain HDFS shell command

Learn the basic HDFS commands

Discuss maintenance and administrative

# Action in HDFS

Create Files

Append Files

Read Files

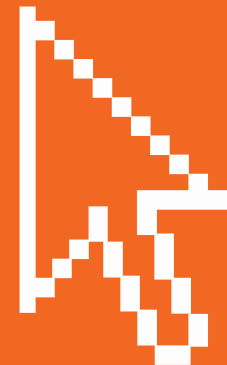
Delete Files

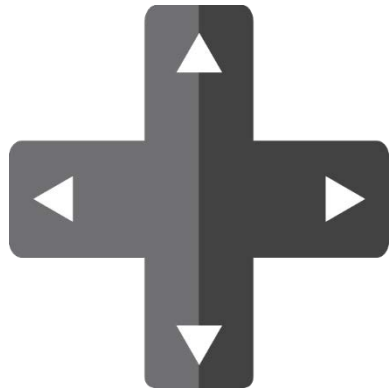
HDFS does not allow for files to  
be edited

# WinSCP Demo

WinScp

Show Data





## HDFS shell interaction

# File System Commands

Shell-like commands

HDFS dfs

Navigate HDFS

```
hdfs dfs - [some command]
```

Example:

```
hdfs dfs - ls
```

```
hdfs dfs - ls /user/
```

## The Shell

Interacting with the HDFS command shell



# HDFS DFS or Hadoop FS?

```
$ hdfs dfs - [some command]
```

```
$ hadoop fs - [some command]
```

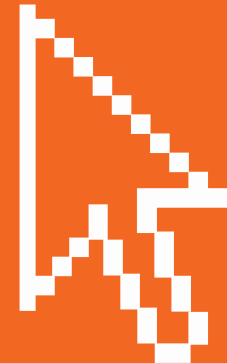
`hdfs dfs -ls = Hadoop fs -ls`

# Demo Place holder

Show interacting with command shell

Hdfs dfs -ls

Hdfs dfs -ls /user/





# Basic Shell Commands

```
Hdfs dfs -help
```

```
//displays help data
```

## Help

Quick display of the commands from anywhere in the shell

```
Hdfs dfs - ls
```

Some files...

Some directories...

## List

Displays a list of files and directories in current path

```
Hdfs dfs -touchz filename
```

```
//creates filename in current directory
```

## Touch

Creates file with zero length

```
Hdfs dfs -cat filename
```

```
//displays output.....
```

## Cat

Displays the file content to the screen

```
Hdfs dfs -mkdir /newdirectory
```

```
...$newdirectory/
```

## Make Directory

Create a new directory



```
Hdfs dfs -cp filename filename2
```

```
//filename now copied to and saved to filename2
```

## Copy

Copy file or files

```
Hdfs dfs -mv filename /newdirectory/filename
```

```
//filename now moved to newdirectoy/
```

## Move

Move file or files from one location to another

# Demo Place holder





# Permissions Shell Commands

# HDFS File Permissions

- POSIX (Linux) permissions model
  - Read (read or list)
  - Write (create or delete)
- Groups
- Owner



# Example File Permission

```
$ls
```

```
...
```

```
-rw-r--r-- user group Somefile.txt
```

```
Hdfs dfs -chmod [num] /somedirectory
```

```
Hdfs dfs -chmod -R [num] /somedirectory
```

## Change Mode

Change the mode file or files

```
Hdfs dfs -chgrp [group]/somedirectory
```

```
Hdfs dfs -chgrp -R [group] /somedirectory
```

## Change Group

Change the group association of file or files



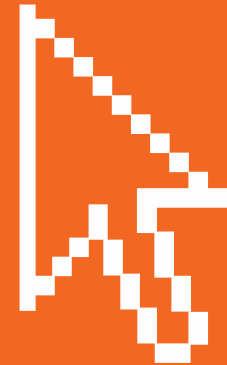
```
Hdfs dfs -chown [owner] /somedirectory
```

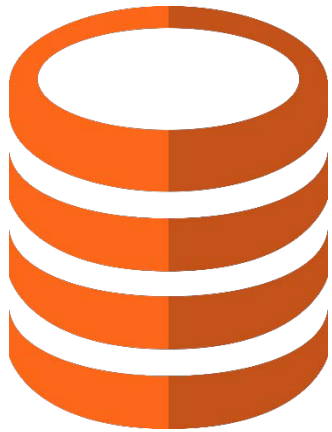
```
Hdfs dfs -chown -R [owner] /somedirectory
```

## Change Owner

Change the ownership of file or files

# Demo Place holder





## Moving Data Shell Commands

```
Hdfs dfs -put /tmp/filename /user/hdfs/filename
```

```
//filename now located in /user/hdfs/...
```

## Put

Copy file or files from local system into hdfs

```
Hdfs dfs -get /user/hdfs/filename /tmp/filename
```

```
//filename now located in local /tmp
```

## Get

Copy file or files from HDFS to local file system

```
Hdfs dfs -moveFromLocal /tmp/filename /user/hdfs/filename
```

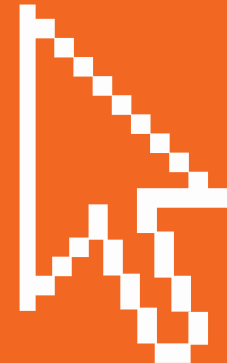
```
//filename now located in /user/hdfs
```

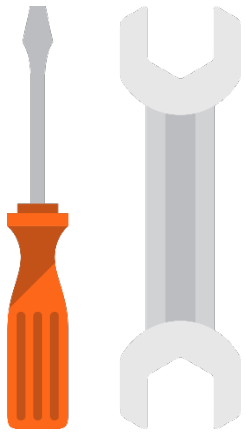
## Move file from local

Moves file from local directory into cluster and deletes local copy

# Demo Place holder

Moving data Demo





## Maintenance Shell Commands



```
Hdfs dfs -rm -r directory
```

```
//removes directory
```

## Remove Directory

Moves directory into trash

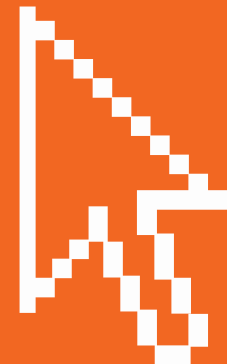
```
Hdfs dfs -expunge
```

```
//trash is taken out...
```

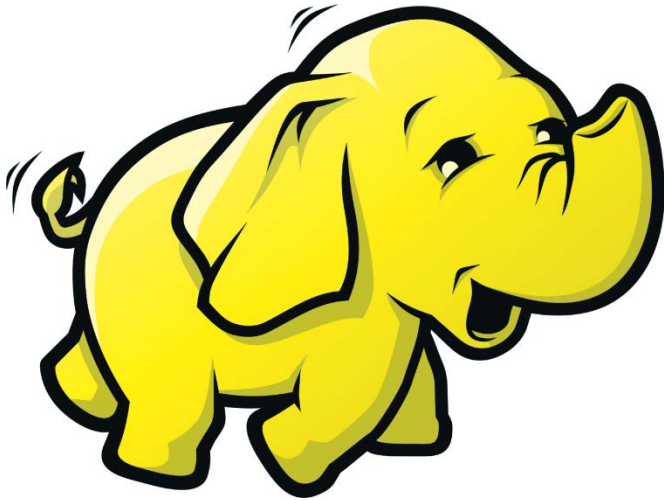
## Expunge

Empties trash

# Demo Place holder



# Summary



How to interact with DFS shell

Used the basic commands shells

Moved data around in HDFS

Discussed file permissions

Briefly looked at maintenance commands