Hdfs Basic File Operations:

**1.File Upload:**

hadoop fs -put <localsource> <hdfsdestination>

hdfs dfs -put <localsource> <hdfsdestination>

**2.File Download:**

hadoop fs -get <hdfssource> <localdestination>

hdfs dfs -get <hdfssource> <localdestination>

**3.File Listing**:

hadoop fs -ls <hdfslocation>

hdfs dfs -ls <hdfslocation>

**4.File Deletion:**

hadoop fs -rm <hdfsfile>

hdfs dfs -rm <hdfsfile>

**5.File Moving/Renaming:**

hadoop fs -mv <hdfsoldpath> <hdfsnewpath>

hdfs dfs -mv <hdfsoldpath> <hdfsnewpath>

**6.File Copying:**

hadoop fs -cp <hdfsfile> <hdfsdestination>

hdfs dfs -cp <hdfsfile> <hdfsdestination>

Advanced File Operations:

**7.Changing File Permissions:**

hadoop fs -chmod <permissions> <hdfsfile>

hdfs dfs -chmod <permissions> <hdfsfile>

**8.Changing File Ownership:**

hadoop fs -chown <owner:group> <hdfsfile>

hdfs dfs -chown <owner:group> <hdfsfile>

**9.File Block Size Alteration:**

hadoop fs -Ddfs.block.size=<blocksize> -put <localsource> <hdfsdestination>

hdfs dfs -Ddfs.block.size=<blocksize> -put <localsource> <hdfsdestination>

**10.Appending to Files (Hadoop 3.x and above):**

hdfs dfs -appendToFile <localsource> <hdfsfile>

hdfs dfs -appendToFile <localsource> <hdfsfile>

**11.Checksum Calculation:**

hadoop fs -checksum <hdfsfile>

hdfs dfs -checksum <hdfsfile>

**12.File Concatenation:**

hadoop fs -concat <src1> <src2> <dst>

hdfs dfs -concat <src1> <src2> <dst>

**Extended File Operations:**

**File Compression/Decompression:**

hadoop fs -gzip <hdfsfile>

hadoop fs -gunzip <hdfsfile>

**File Checksum Comparison:**

hadoop fs -compareChecksum <hdfsfile1> <hdfsfile2>

hadoop fs -diff <hdfsfile1> <hdfsfile2>

**File Content Summary:**

hadoop fs -du -s -h <hdfslocation>

hadoop fs -count -q -h <hdfslocation>

**File Block Location Information:**

hadoop fsck <hdfsfile> -files -blocks -locations

**File Replication Factor Modification:**

hadoop fs -setrep -R <replicationfactor> <hdfslocation>

hadoop fs -setrep -w <replicationfactor> <hdfslocation>

**File Snapshot Creation and Management:**

hadoop fs -createSnapshot <hdfslocation> <snapshotname>

hadoop fs -deleteSnapshot <hdfslocation> <snapshotname>

hadoop fs -renameSnapshot <hdfslocation> <oldsnapshotname> <newsnapshotname>

**File Encryption/Decryption (when encryption is enabled):**

hadoop key create <keyname>

hadoop fs -encrypt -keyName <keyname> <hdfsfile>

hadoop fs -decrypt <hdfsfile>

1. Interacting with HDFS using command line interface to understand the basic working structure of Hadoop cluster.

**List contents of a directory:**

**Change current working directory:**

**View the current working directory:**

**File Operations:**

Copy files/directories from local file system to HDFS:

Copy files/directories from HDFS to local file system:

Remove files/directories from HDFS:

Rename files/directories in HDFS:

**3. File System Information:**

Get file information such as replication, block size, owner, etc.:

Check disk usage of files/directories:

Check integrity of the file system:

**Admin Operations:**

Change replication factor of a file:

View and modify HDFS quotas:

Check cluster health and status:

**Additional File Operations:**

1. **Appending to Files (Hadoop 3.x and above):**

* **Append content to a file in HDFS:**

hdfs dfs -appendToFile <local-source> <hdfs-destination>

2. **Concatenating Files:**

* **Concatenate multiple files into a single file in HDFS:**

hdfs dfs -getmerge <hdfs-source> <local-destination>

3. **File Content Summary:**

* **Get a summary of directory sizes and their contents:**

hdfs dfs -du [-h] <path>

4. **File Block Manipulation:**

* **Get information about blocks in a file:**

hdfs fsck <hdfs-file> -files -blocks -locations

* **Force an immediate block replication of a file:**

hdfs dfs -setrep -R <replication-factor> <hdfs-file>

5. **File Checksum Operations:**

* **Calculate checksum of a file in HDFS:**

hdfs dfs -checksum <hdfs-file>

* **Compare checksums of two files:**

hdfs dfs -compareChecksum <hdfs-file1> <hdfs-file2>

6. **File Encryption/Decryption (when encryption is enabled):**

* **Create a new key for encryption:**

hdfs crypto -createZone -keyName <key-name> -path <path>

* **Encrypt a file:**

hdfs crypto -encrypt -keyName <key-name> <hdfs-file>

* **Decrypt a file:**

hdfs crypto -decrypt <hdfs-file>