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Practical -2

HDFS COMMANDS

1. JPS

- Syntax: jps [options]

1. List all Java processes with their PIDs:

jps

2. List all Java processes with their PIDs and main class names:

jps -l

3. List all Java processes with their PIDs and JVM arguments:

jps -v

4. List all Java processes with their PIDs, main class names, and arguments passed to the main method:

jps -m

- Description: Lists Java processes running on the machine, showing their Process IDs (PIDs) and main classes.

2. mkdir

- Syntax: hadoop fs -mkdir [options] <directory_path>

- **Description:** Creates a new directory with the specified name.

3. ls

- **Syntax:** `hadoop fs -ls [options] <path>`

- **Description:** Lists files and directories in the specified path or current directory. Options can include `-l` for long format, `-a` for all files including hidden ones.

4. put

- **Syntax:** `hadoop fs -put local_path [remote_path]`

- **Description:** Uploads a file from the local system to a remote filesystem (often used with HDFS commands).

5. get

- **Syntax:** `hadoop fs -get remote_path [local_path]`

- **Description:** Downloads a file from a remote filesystem to the local system (often used with HDFS commands).

6. cat

- **Syntax:** `hadoop fs -cat [options] file_name`

- **Description:** Concatenates and displays the content of one or more files.

7. mv

- **Syntax:** `hadoop fs -mv [options] source destination`

- **Description:** Moves or renames files or directories from the source to the destination.

8. cp

- **Syntax:** `hadoop fs -cp [options] source destination`

- **Description:** Copies files or directories from the source to the destination.

9. movefromlocal

- **Syntax:** `hadoop fs -movefromlocal local_path remote_path`

- **Description:** Moves a file from the local filesystem to a remote filesystem (often used with HDFS commands).

10. movetolocal

- **Syntax:** `hadoop fs -movetolocal remote_path local_path`

- **Description:** Moves a file from a remote filesystem to the local filesystem (often used with HDFS commands).

11. rm

- **Syntax:** `hadoop fs -rm [options] file_name`

- **Description:** Removes (deletes) files or directories. Use `-r` for recursive deletion of directories.

12. tail

- **Syntax:** `hadoop fs -tail [options] <file>`

5. Display the last 1KB of a file:

`hadoop fs -tail /user/hadoop/file.txt`

6. Follow the file as it grows:

`hadoop fs -tail -f /user/hadoop/file.txt`

- **Description:** Outputs the last part of a file. Options like `-f` can be used to follow the file for new additions.

13. expunge

- **Syntax:** `hadoop fs -expunge [options] path`

- **Description:** Removes files or directories permanently from a filesystem (e.g., HDFS).

14. chown

- **Syntax:** `hadoop fs -chown [options] owner[:group] file_name`
- **Description:** Changes the owner and/or group of a file or directory.

15. chgrp

- **Syntax:** `hadoop fs -chgrp [options] group file_name`
- **Description:** Changes the group ownership of a file or directory.

16. setrep

- **Syntax:** `hadoop fs -setrep -w [-R] [replication] [path ...]`
- **Description:** Sets the replication factor for files in HDFS.

17. du

- **Syntax:** `hadoop fs -du [URI]`
- **Description:** Estimates and reports the disk space used by files and directories.

18. df

- **Syntax:** `hadoop fs -df [options] [path]`

7. Human-Readable Format:

`hadoop fs -df -h`

- **Description:** Reports the amount of disk space used and available on filesystems.

19. fsck

- **Syntax:** `hadoop fs -fsck [options] [path]`
- **Description:** Checks the filesystem for errors and inconsistencies (often used with HDFS).

20. touch

- **Syntax:** `hadoop fs -touch [options] file_name`

- **Description:** Changes file timestamps or creates an empty file if it doesn't exist.

21. text

- **Syntax:** `hadoop fs -text [options] file_name`

- **Description:** (Note: The `text` command is not standard and may vary based on context. It might be used to display or process text files.)

22. stat

- **Syntax:** `hadoop fs -stat [options] file_name`

- **Description:** Displays detailed information about a file or directory, such as size, permissions, and modification times.

23. chmod

- **Syntax:** `hadoop fs -chmod [options] mode file_name`

- **Description:** Changes the permissions of a file or directory using symbolic or octal modes.

24. appendtofile

- **Syntax:** `hadoop fs -appendtofile file_name "text_to_append"`

- **Description:** Appends text to the end of a file (note that this is not a standard Unix command, and its implementation may vary).

25. checksum

- **Syntax:** `hadoop fs -checksum [options] file_name`
- **Description:** Computes and displays a checksum for a file to verify its integrity.

26. count

- **Syntax:** `hadoop fs -count [options] path`

8. Show Quotas (-q):

`hadoop fs -count -q <paths>`

9. Human-Readable Format (-h):

`hadoop fs -count -h <paths>`

10. Verbose Output (-v):

`hadoop fs -count -v <paths>`

11. Exclude Snapshots (-x):

`hadoop fs -count -x <paths>`

12. Storage Type Quota and Usage (-t):

`hadoop fs -count -t <storage type> <paths>`

13. Quota Usage Only (-u):

`hadoop fs -count -u <paths>`

14. Erasure Coding Policy (-e):

`hadoop fs -count -e <paths>`

- **Description:** Counts files, lines, or other entities in a directory or file (not a standard command, but may be used in custom scripts).

27. find

- **Syntax:** `hadoop fs -find [path] [options] [expression]`

- **Description:** Searches for files and directories in a directory hierarchy based on specified criteria.

28. getmerge

- **Syntax:** `hadoop fs -getmerge [-nl] [src ...] [dest]`

- **Description:** Merges files from HDFS into a single file on the local filesystem.

29. stat with options

- **Syntax:**

15. Get the file name and modification time:

`hadoop fs -stat "%n %y" /user/hadoop/file.txt`

16. Get the block size and replication factor:

`hadoop fs -stat "%o %r" /user/hadoop/file.txt`

17. Get all details:

`hadoop fs -stat "%n %y %u %g %b %d" /user/hadoop/file.txt`

- **Description:** Displays detailed information about a file or directory, such as size, permissions, and modification times.