Lab 3

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Aim: Word Count Using Map Reduce

Objectives:

1. To run Hive command.
2. Copy Data file from Local to HDFS.
3. Generate a Word count query.
4. Display Word count of the file

Codes:

//Map Reduce in HIVE

hive

CREATE TABLE FILES (line STRING);

LOAD DATA INPATH 'data1.txt' OVERWRITE INTO TABLE FILES;

CREATE TABLE word_count AS

SELECT w.word, count(1) AS count from

(SELECT explode(split(line, ' ')) as word from FILES) w

GROUP BY w.word

ORDER BY w.word;

SELECT * FROM word_count ;

```
[cloudera@quickstart hive1]$ hadoop fs -put data.txt data1.txt
[cloudera@quickstart hive1]$ hive
Logging initialized using configuration in file:/etc/hive/conf.dist/hive-log4j.properties
WARNING: Hive CLI is deprecated and migration to Beeline is recommended.
hive> LOAD DATA INPATH 'data1.txt' OVERWRITE INTO TABLE FILES;
Loading data to table default.files
chgrp: changing ownership of 'hdfs://quickstart.cloudera:8020/user/hive/warehouse/files/data1.txt':
does not belong to supergroup
Table default.files stats: [numFiles=1, numRows=0, totalSize=50, rawDataSize=0]
OK
```

In order to change the average 1oad •or a reducer (in bytes) :
  Set hive.exsc.seducers.bytes.per.reducer=‹ number>
In order to limit the maximum number of seducers:
  set hive.exec.seducers.max:‹ number ›
In order to set a constant number of seducers:
  set mapreduce.job.reduces=‹ numben>
Starting 3ob: job 1614416156655_B082, Tracking URL:
http://quickstart.cloudera:â0B8/proxyfapplication_16l4416156655_B B2/
K:ill Command = /usn/11b/hadoop/b:in/hadoop job -k:ill job 16L4416156655 9682
l-ladoop job 1nformation for Stage -Z : number of rappers : 1i number of reducers : 1 2621—
02—27 B2:B9:4e,727 Stage-2 map = 8g, reduce = a'g
2021-62-27 02 : 09 : 52, B72 Stage-2 map = 1001, reduce = B •, Curru1at1 ve CPU 1.5 sec
2621-B2-27 BZ:GB:BB,B57 Stage-2 map = 1B0g, reduce = been, Cumu1 ative CPU 5.B4 sec
MapReduce Total cuoulat1ve CPU t:ime: 5 seconds 48 msec
Ended 3eb = yob_16l44l6156655_BB6Z
Novlng data to: hd€s: / /qul c kstart. c1oudera:ae2a/user/ hive/warehouse/word_count
7able default.word_count stats: [numFiles=1, numRows=7, totalSize=54, rawDatzSize=47]
NapReduce 3obs Launched:
Stage-Stage-1: Map: l Reduce: 1 Cumulative cPu: 9.74 etc HDFS Read: 7589 HDFS Write. 262 SUCCESS
Stage-Stage-Z: Map: l Reduce: I Eumulative CPU: 5.04 sec HDF5 Aead: 4886 MDFS Write: 128 SUC0E5S
Total MapReduce CPU Time Spent: 8 seconds 7ae msec

h1ve › CREATE TABLE word_count A5
› **SELECT w.** xord, count (1) AS count from
» (SELECT explode(sp1lt(11ne, ' ')) AS word FRON FILES) u
› GROUP BY w. word
› ORDER BY x.xord;
query ID = c louder a_2e21e227820808_9b7e 516d -essb-<wg -sfc6 -56dra2c78bbc
Tptal jobs = 2
Launching 3ob 1 out of 2
Number of reduce tas ks not specified. E stlmated Iron 1nput data s1ze: 1
In order to change the average 1oad -for a reducer (in bytes) :
  set hive .exec . seducers . bytes . per . reducer=<number›
In order to limit the maximum number of seducers:
  set hive .exec. seducers . max=‹number›
In order to set a constant number of seducers :
  set etapreduce . j ob.reduces=‹nuober›
Starting Job = job_16L44l6l&66SS_000l, Tracking URL:
http://quickztart.cloudera:8088/proxy/application_16144l6l56658_ee01/
Kill Command = /usr/lib/hadoop/bin/hadoop job -kill job_1614416156655_ee0l
Nadoop job 1nJ"-ormation -For Stage -1 : nultiber a-F rappers : 1; number of seducers : 1 2021-e2-
27 ez : e9 : 83,631 Stage -1 nap = US, reduce = BE
2021-82-27 e2: e9:15, 283 Stage -1 map = 1001, reduce = 0X•, Cumu1at1ve CPU 2. e2 sec
2B21-82-27 02: B9 : 27,523 Stage -1 map = 1BBX, reduce = 18Bg, Cunu1at1ve CPU 3.74 sec
l4apReduce Total cumu1at1ve CPU €1ne: 3 seconds 74ig lnsec
Ended Job = job_16l4416l56658_000l
Launching 3ob 2 out of 2
Eumber o+ reduce tasks determined at compile time: 1

h1ve› SELECT * FRON word_count

OK
Th1s 2
a 2
h1ve 1
is 2
spark 1
tutorial 1
tutorial. 1
Time taken: e.ea2 seconds, Fetched: 7 row(s)