

## **EXP. 24: LAUNCH THE HADOOP 2.X AND PERFORM MAPREDUCE PROGRAM FOR A WORD COUNT PROBLEM**

**AIM:** LAUNCH THE HADOOP 2.X AND PERFORM MAPREDUCE PROGRAM FOR A WORD COUNT PROBLEM

### **PROCEDURE:**

#### **Step 1 - Open Terminal**

\$ su hduser Password:

#### **Step 2 - Start dfs and mapreduce services**

\$ cd /usr/local/hadoop/hadoop-2.7.2/sbin

\$ start-dfs.sh

\$ start-yarn.sh

\$ jps

#### **Step 3 - Check Hadoop through web UI**

// Go to browser type <http://localhost:8088> – All Applications Hadoop Cluster

// Go to browser type <http://localhost:50070> – Hadoop Namenode

#### **Step 4 – Open New Terminal**

\$ cd Desktop/

\$ mkdir inputdata

\$ cd inputdata/

\$ echo "Hai, Hello, How are you? How is your health?" >> hello.txt

\$ cat >> hello.txt

#### **Step 5 – Go back to old Terminal**

\$ hadoop fs -copyFromLocal /home/hduser/Desktop/inputdata/hello.txt /folder/hduser

// Check in hello.txt in Namenode using Web UI

#### **Step 6 – Download and open eclipse by creating workspace**

Create a new java project.

#### **Step 7– Add jar to the project**

You need to remove dependencies by adding jar files in the hadoop source folder. Now Click on Project tab and go to Properties. Under Libraries tab, click Add External JARs and select all the jars in the folder (click on 1st jar, and Press Shift and Click on last jar to select all jars in between and click ok)

**/usr/local/hadoop/hadoop-2.7.2/share/hadoop/common**and

**/usr/local/hadoop/hadoop-2.7.2/share/hadoop/mapreduce** folders.

### Step -8 – WordCount Program Create 3 java files named

- WordCount.java
- WordCountMapper.java
- WordCountReducer.java

### Step 9 - Creatr JAR file

Now Click on the Run tab and click Run-Configurations. Click on New Configuration button on the left-top side and Apply after filling the following properties.

### Step 10 - Export JAR file

Now click on File tab and select Export. under Java, select Runnable Jar.

In Launch Config – select the config fie you created in **Step 9** (WordCountConfig).

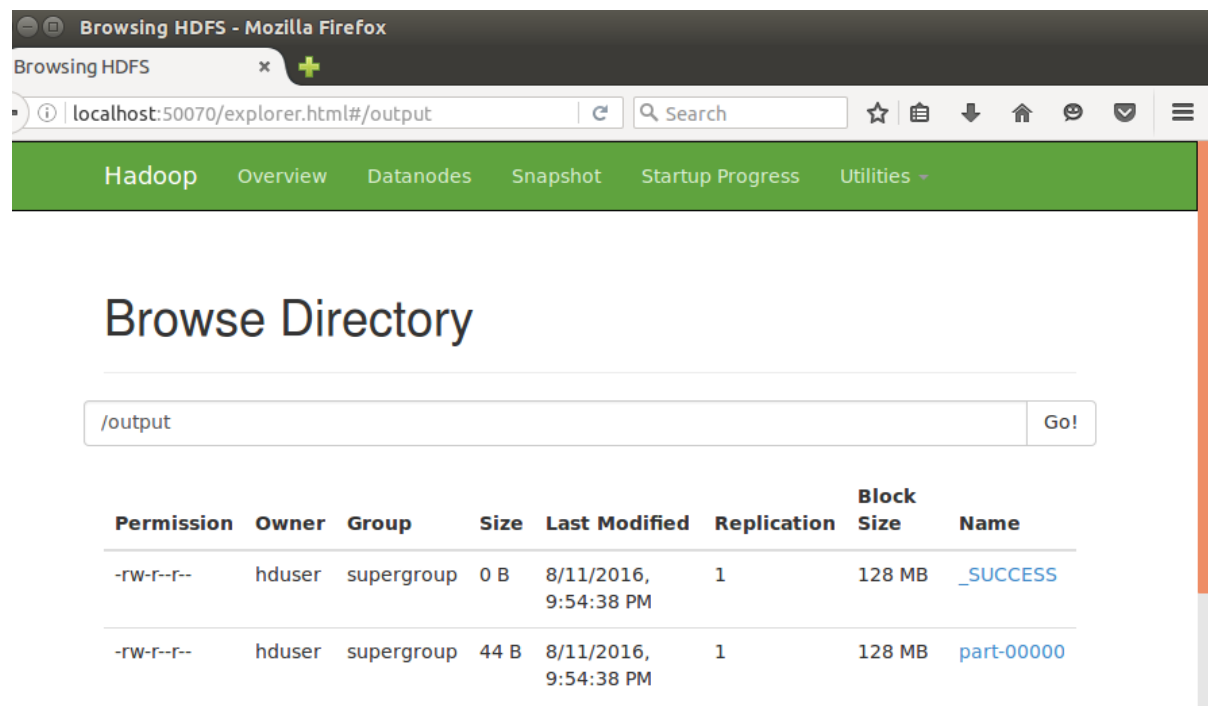
Select an export destination (lets say desktop.)

Under Library handling, select Extract Required Libraries into generated JAR and click Finish.

Right-Click the jar file, go to Properties and under **Permissionstab**, Check Allow executing file as a program. and give Read and Write access to all the users

**Step 11** – To view results in old Terminal

### IMPLEMENTATION:



Browsing HDFS - Mozilla Firefox

Browsing HDFS

localhost:50070/explorer.html#/output

Hadoop Overview Datanodes Snapshot Startup Progress Utilities

## Browse Directory

/output Go!

Permission	Owner	Group	Size	Last Modified	Replication	Block Size	Name
-rw-r--r--	hduser	supergroup	0 B	8/11/2016, 9:54:38 PM	1	128 MB	<a href="#">_SUCCESS</a>
-rw-r--r--	hduser	supergroup	44 B	8/11/2016, 9:54:38 PM	1	128 MB	<a href="#">part-00000</a>

Browsing HDFS - Mozilla Firefox

Browsing HDFS x +

localhost:50070/explorer.html#/

Search

Permission	Owner	Group	Size	Last Modified	Replication	Size	Name
drwxr-xr-x	hduser	supergroup	0 B	8/12/2016, 12:20:50 AM	0	0 B	<a href="#">cloud</a>
drwxr-xr-x	hduser	supergroup	0 B	8/11/2016, 1:47:41 AM	0	0 B	<a href="#">cse</a>
drwxr-xr-x	hduser	supergroup	0 B	8/4/2016, 11:37:37 PM	0	0 B	<a href="#">folder</a>
drwxr-xr-x	hduser	supergroup	0 B	8/11/2016, 9:52:15 PM	0	0 B	<a href="#">grid</a>
drwxr-xr-x	hduser	supergroup	0 B	8/11/2016, 9:54:38 PM	0	0 B	<a href="#">output</a>
drwxr-xr-x	hduser	supergroup	0 B	8/11/2016, 11:54:23 PM	0	0 B	<a href="#">project</a>
drwx-----	hduser	supergroup	0 B	8/4/2016, 11:40:37 PM	0	0 B	<a href="#">tmp</a>

**RESULT:** To Launch The Hadoop 2.X And Perform Mapreduce Program For A Word Count Problem Have Successfully Implemented.