RUNNING A MAPREDUCE PROGRAM ON CDH INSTANCE ON AWS

PREREQUISITES

- Please ensure that you have installed the following on your Windows machine:
    1. WinSCP tool
    2. Notepad++

IMPORTANT INSTRUCTIONS

- The following notations have been used while running the Java API code.

  [ec2-user@ip-10-0-0-14 ~]$ **hadoop command**

  Output of the command

  As shown above, the command to be run is written in **bold.** The output of the command is written in *italics*. The [**ec2-user**@ip-10-0-0-14 ~] tells us the user through which the command is to be executed.

- Please be careful with the spaces in the commands.
- If a series of commands is given in a particular order, make sure that you run them in the same order.

NOTE: Before starting with the document below, it is necessary to have created the EC2 instance with Cloudera installed on it and to have connected to it as well. If not so, kindly go through Video 1 and Video 2 before getting started with this document.

STEPS TO RUN THE WORDCOUNT PROGRAM ON AMAZON EC2

- To check whether Java is available or not, do the following:
    1. Switch to the root user using **sudo-i**
    2. Now, run the following command

       [root@ip-10-0-0-105 ~]# **ls /usr/java/jdk1.7.0_67-cloudera/**

- Set the JAVA_HOME and JRE_HOME in the /etc/profile location.
    1. Open the file using the command given below.

       vi /etc/profile
    2. Add the following at the end of the file as shown below. Please change to the insert mode by pressing **i** before pasting the following lines.

       export JAVA_HOME=/usr/java/jdk1.7.0_67-cloudera/

       export JRE_HOME=/usr/java/jdk1.7.0_67-cloudera/jre/

       export PATH=$JAVA_HOME/bin:$PATH

```
for i in /etc/profile.d/*.sh ; do
    if [ -r "$i" ]; then
        if [ "${-#*i}" != "$-" ]; then
            . "$i"
        else
            . "$i" >/dev/null
        fi
    fi
done

unset i
unset -f pathmunge
export JAVA_HOME=/usr/java/jdk1.7.0_67-cloudera/
export JRE_HOME=/usr/java/jdk1.7.0_67-cloudera/jre/
export PATH=$JAVA_HOME/bin:$PATH

-- INSERT --
```

    3. Now, save and exit the file. It is important to exit from the insert mode and enter the following in the command mode while using the vi editor:

       :wq!

- Now run the following commands as shown below:

  [root@ip-10-0-0-105 ~]# **source /etc/profile**

  [root@ip-10-0-0-105 ~]# **echo $JAVA_HOME**

  /usr/java/jdk1.7.0_67-cloudera/

  [root@ip-10-0-0-105 ~]# **java -version**

  java version "1.7.0_67"

  Java(TM) SE Runtime Environment (build 1.7.0_67-b01)

  Java HotSpot(TM) 64-Bit Server VM (build 24.65-b04, mixed mode)

  [root@ip-10-0-0-105 ~]# **javac -version**

  javac 1.7.0_67

```
[root@ip-10-0-0-105 ~]# source /etc/profile
[root@ip-10-0-0-105 ~]# echo $JAVA_HOME
/usr/java/jdk1.7.0_67-cloudera/
[root@ip-10-0-0-105 ~]# java -version
java version "1.7.0_67"
Java(TM) SE Runtime Environment (build 1.7.0_67-b01)
Java HotSpot(TM) 64-Bit Server VM (build 24.65-b04, mixed mode)
[root@ip-10-0-0-105 ~]# javac
Usage: javac <options> <source files>
where possible options include:
  -g                             Generate all debugging info
  -g:none                        Generate no debugging info
  -g:{lines,vars,source}         Generate only some debugging info
  -nowarn                        Generate no warnings
  -verbose                       Output messages about what the compiler is doing
  -deprecation                   Output source locations where deprecated APIs are used
  -classpath <path>              Specify where to find user class files and annotation processors
  -cp <path>                     Specify where to find user class files and annotation processors
  -sourcepath <path>             Specify where to find input source files
  -bootclasspath <path>          Override location of bootstrap class files
  -extdirs <dirs>                Override location of installed extensions
  -endorseddirs <dirs>           Override location of endorsed standards path
  -proc:{none,only}              Control whether annotation processing and/or compilation is done.
  -processor <class1>[,<class2>,<class3>...] Names of the annotation processors to run; bypasses default discovery process
  -processorpath <path>          Specify where to find annotation processors
  -d <directory>                 Specify where to place generated class files
  -s <directory>                 Specify where to place generated source files
  -implicit:{none,class}         Specify whether or not to generate class files for implicitly referenced files
  -encoding <encoding>           Specify character encoding used by source files
  -source <release>              Provide source compatibility with specified release
  -target <release>              Generate class files for specific VM version
  -version                       Version information
  -help                          Print a synopsis of standard options
  -Akey[=value]                  Options to pass to annotation processors
  -X                             Print a synopsis of nonstandard options
  -J<flag>                       Pass <flag> directly to the runtime system
  -Werror                        Terminate compilation if warnings occur
  @<filename>                    Read options and filenames from file

[root@ip-10-0-0-105 ~]# javac -version
javac 1.7.0_67
```

Copying the “WordCount.Java” program to the CDH Instance on AWS

Linux/Mac users:

Use the below command:

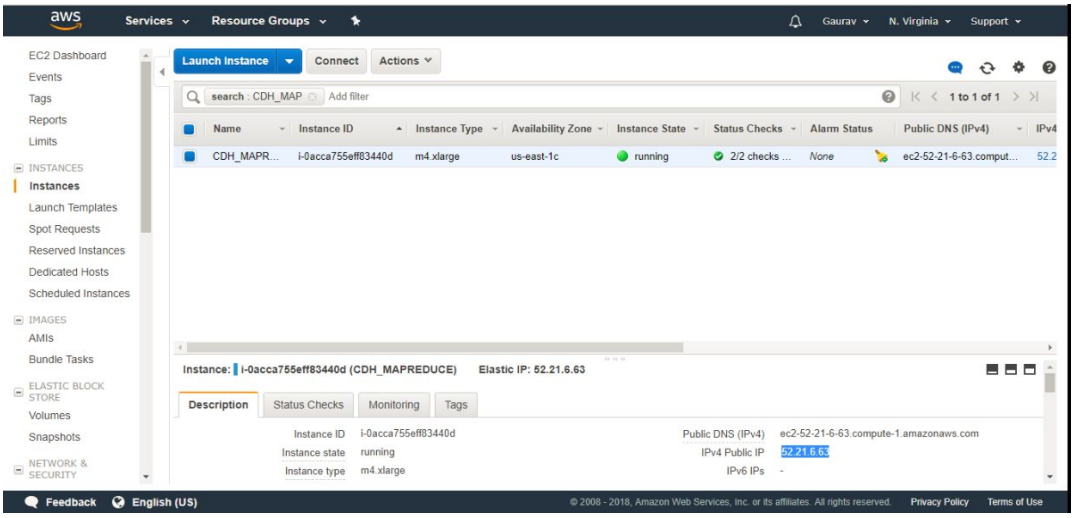
scp -i <enter the path of the .pem file > WordCount.java ec2-user@<your Public IP>:/home/ec2-user/

```
Vibhores-MacBook-Pro:Downloads vibhoresharma$ chmod 400 cdh_hdfs.pem
Vibhores-MacBook-Pro:Downloads vibhoresharma$ scp -i cdh_hdfs.pem abt.java ec2-user@52.21.6.63:/home/ec2-user/
/etc/profile.d/lang.sh: line 19: warning: setlocale: LC_CTYPE: cannot change locale (UTF-8): No such file or directory
abt.java
```

Windows users:

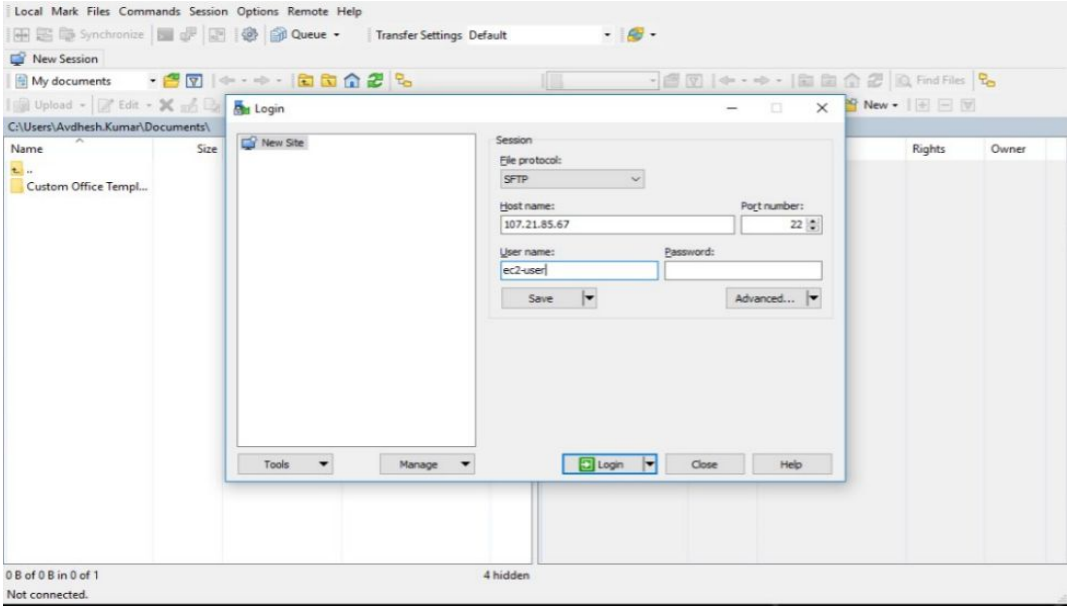
- WinSCP is a tool to transfer a file from a Windows machine to a Linux machine (EC2 instance).
    1. Open WinSCP.
    2. Enter the following credentials

       Hostname: **Provide the public IP from the EC2 dashboard.**

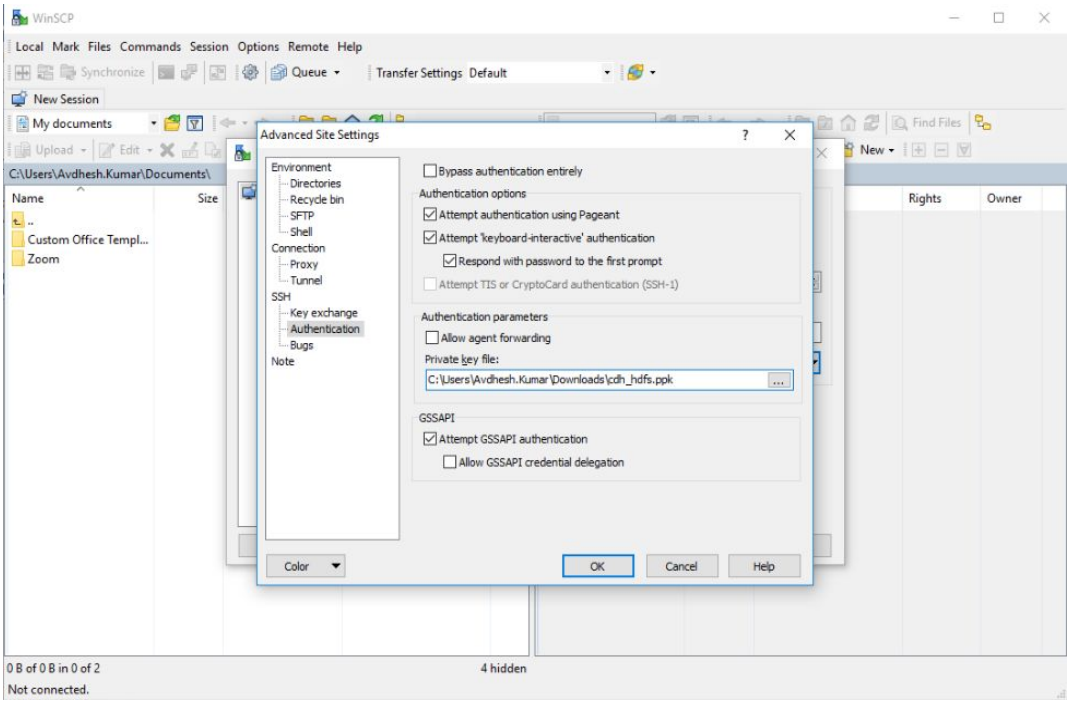


Username: **ec2-user**

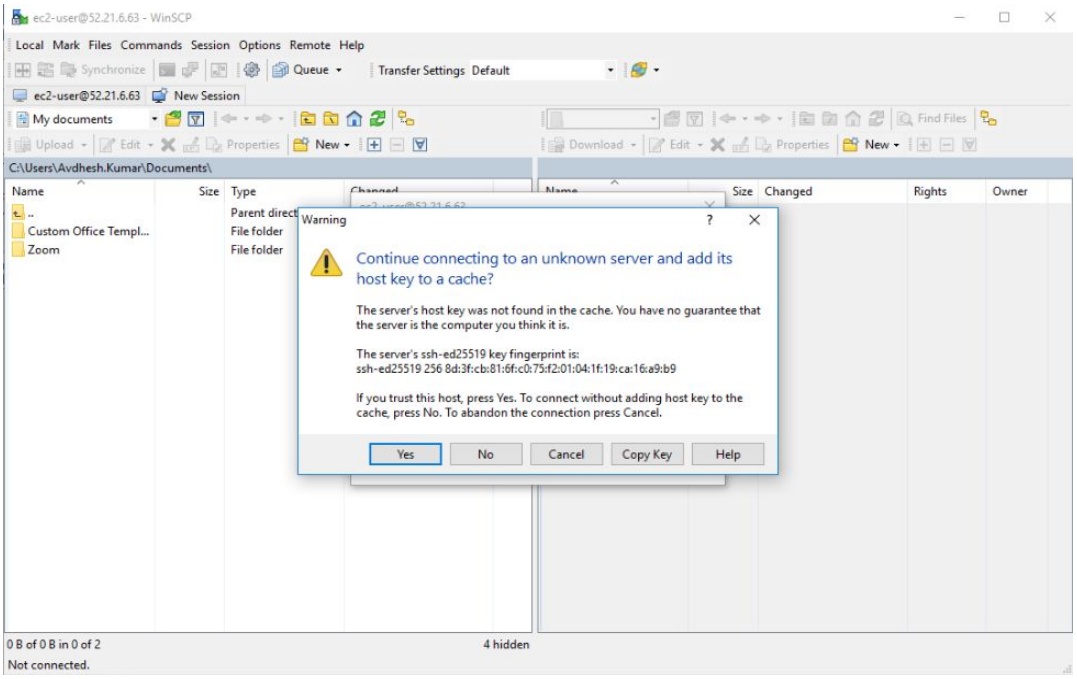
Then, click on '**Advanced**'.



3. After clicking on '**Authentication**'**,** enter the path of your PPK file.



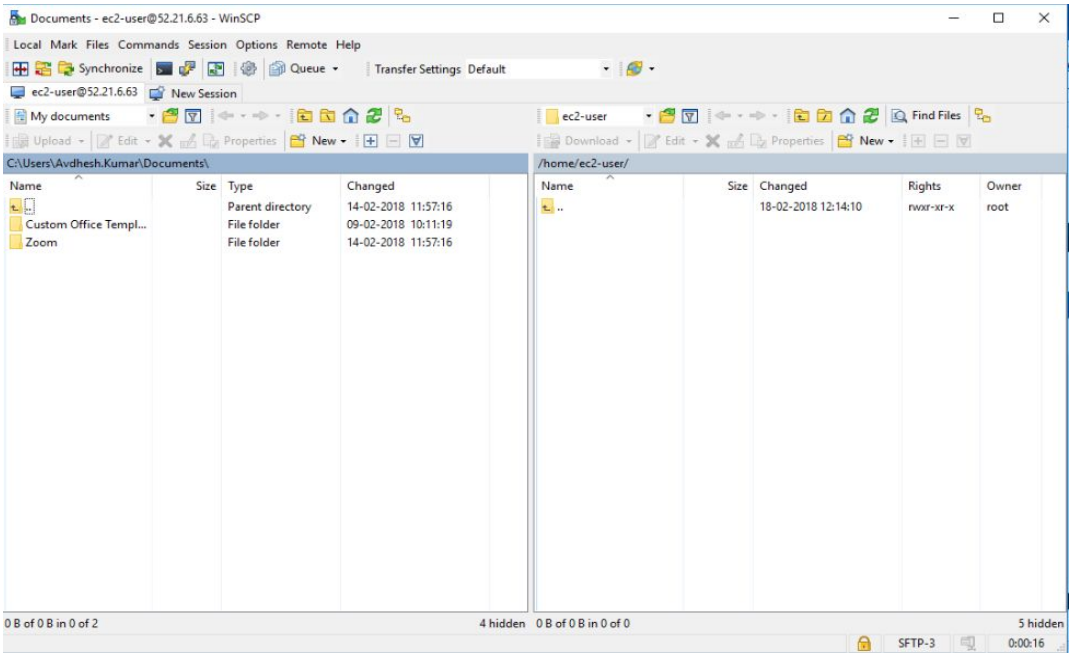
4. Click on '**OK**' followed by '**Login**' after which the a pop-up will appear. Click on '**Yes**'.



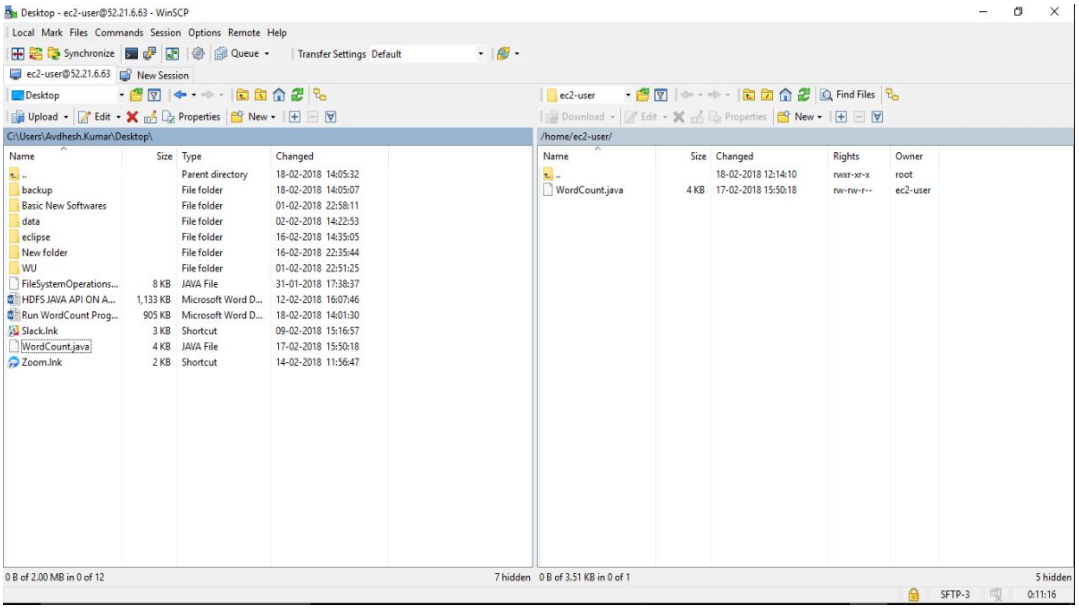
5. The following screen appears:

   Left side screen: your local machine (Windows, in our case)

   Right side screen: your linux machine (AWS EC2 instance)



6. Browse to the ‘WordCount.java’ file on the left side and drag and drop it to the right. Click on ‘**OK**’ on the prompt which appears.



7. We have now successfully copied the ‘WordCount.java’ from our local machine to our EC2 instance.

- Now, go back to AWS EC2 instance. Copy the ‘WordCount.java’ from ‘/home/ec2-user/’ to the root home directory i.e ‘/root’ using the command given below and verify it using the ‘ls’ command.

  [root@ip-10-0-0-105 ~]# **cp /home/ec2-user/Wordcount.java /root**

```
[root@ip-10-0-0-105 ~]# cp /home/ec2-user/WordCount.java /root
[root@ip-10-0-0-105 ~]# ls
anaconda-ks.cfg  cloudera-manager-installer.bin  mysql-community-release-el7-5.noarch.rpm  original-ks.cfg  WordCount.java
[root@ip-10-0-0-105 ~]#
```

Creating a file using a root user

- Create a file ‘input.txt’ in your local filesystem using the ‘cat’ command and enter the desired text in the file as shown below. Use ‘Ctrl+d’ to save and exit the file.

  cat > input.txt

```
[root@ip-10-0-0-105 ~]# cat > input.txt
The course 2 of the big data program is the most important part of the entire program
[root@ip-10-0-0-105 ~]#
```

- Now verify whether the file has been created or not using the 'ls' command.

```
[root@ip-10-0-0-105 ~]# ls
anaconda-ks.cfg  cloudera-manager-installer.bin  input.txt  mysql-community-release-el7-5.noarch.rpm  original-ks.cfg  WordCount.java
[root@ip-10-0-0-105 ~]#
```

Create a directory inside the HDFS and changing it's owner

- The commands used below demonstrate how to create a directory in the HDFS.

  Note: A directory can be created in hadoop only using the hdfs user. So now, switch to the hdfs user. Please note there is a space between **-** and **hdfs** in the command used below**:**

  [root@ip-10-0-0-105 ~]# **su – hdfs**

  [hdfs@ip-10-0-0-105 ~]$ **hadoop fs -mkdir /user/root/**

- You can verify the directory created by running the command shown below.

  [hdfs@ip-10-0-0-105 ~]$ **hadoop fs -ls /user/**

  Found 6 items

  drwxrwxrwx - mapred hadoop 0 2018-02-09 09:28 /user/history

  drwxrwxr-t - hive hive 0 2018-02-09 09:30 /user/hive

  drwxrwxr-x - hue hue 0 2018-02-09 09:30 /user/hue

  drwxrwxr-x - oozie oozie 0 2018-02-09 09:30 /user/oozie

  *drwxr-xr-x - **hdfs** supergroup 0 2018-02-12 05:58 /user/root*

  drwxr-x--x - spark spark 0 2018-02-09 09:29 /user/spark

  Now, as seen above, the owner of the directory created is **hdfs** (underlined above). To send a file from any user to hdfs, the owner of the directory inside hdfs should be changed to the user sending the file. For example: If you have to send a file from the root user to a directory inside hdfs, the owner of that particular directory inside hdfs should be changed to root.

- To change the owner of the directory created from hdfs to root, run the following command:

  [hdfs@ip-10-0-0-105 ~]$ **hadoop fs -chown root /user/root**

- You can verify the same using the command shown below:

  [hdfs@ip-10-0-0-105 ~]$ **hadoop fs -ls /user/**

  Found 6 items

  drwxrwxrwx - mapred hadoop 0 2018-02-18 07:16 /user/history

  drwxrwxr-t - hive hive 0 2018-02-18 07:17 /user/hive

  drwxrwxr-x - hue hue 0 2018-02-18 07:18 /user/hue

  drwxrwxr-x - oozie oozie 0 2018-02-18 07:18 /user/oozie

  *drwxr-xr-x - **root** supergroup 0 2018-02-18 09:49 /user/root*

  drwxr-x--x - spark spark 0 2018-02-18 07:17 /user/spark

  You can see that the owner has changed from **hdfs** to **root**.

```
[root@ip-10-0-0-105 ~]# su - hdfs
[hdfs@ip-10-0-0-105 ~]$ hadoop fs -mkdir /user/root/
[hdfs@ip-10-0-0-105 ~]$ hadoop fs -ls /user/
Found 6 items
drwxrwxrwx   - mapred hadoop              0 2018-02-18 07:16 /user/history
drwxrwxr-t   - hive   hive                0 2018-02-18 07:17 /user/hive
drwxrwxr-x   - hue    hue                 0 2018-02-18 07:18 /user/hue
drwxrwxr-x   - oozie  oozie               0 2018-02-18 07:18 /user/oozie
drwxr-xr-x   - hdfs   supergroup          0 2018-02-18 09:49 /user/root
drwxr-x--x   - spark  spark               0 2018-02-18 07:17 /user/spark
[hdfs@ip-10-0-0-105 ~]$ hadoop fs -chown root /user/root
[hdfs@ip-10-0-0-105 ~]$ hadoop fs -ls /user/
Found 6 items
drwxrwxrwx   - mapred hadoop              0 2018-02-18 07:16 /user/history
drwxrwxr-t   - hive   hive                0 2018-02-18 07:17 /user/hive
drwxrwxr-x   - hue    hue                 0 2018-02-18 07:18 /user/hue
drwxrwxr-x   - oozie  oozie               0 2018-02-18 07:18 /user/oozie
drwxr-xr-x   - root   supergroup          0 2018-02-18 09:49 /user/root
drwxr-x--x   - spark  spark               0 2018-02-18 07:17 /user/spark
[hdfs@ip-10-0-0-105 ~]$
```

- Now, use the 'exit' command to shift from the hdfs user to the root user.

  [hdfs@ip-10-0-0-105 ~]$ **exit;**

  logout

  [root@ip-10-0-0-105 ~]#

```
[hdfs@ip-10-0-0-105 ~]$ exit;
logout
[root@ip-10-0-0-105 ~]#
```

- Now, since the owner has changed from hdfs to root, the root user will be able to create a new directory 'wordcount' inside /user/root/ on the hdfs.

  [root@ip-10-0-0-105 ~]# **hadoop fs -mkdir /user/root/wordcount**

```
[root@ip-10-0-0-105 ~]# hadoop fs -mkdir /user/root/wordcount
[root@ip-10-0-0-105 ~]#
```

- Use the 'put' command to put the 'input.txt' file into the /user/root/wordcount directory. Verify the same using the 'ls' command.

  [root@ip-10-0-0-105 ~]# **hadoop fs -put input.txt /user/root/wordcount/**

  [root@ip-10-0-0-105 ~]# **hadoop fs -ls /user/root/wordcount/**

```
[root@ip-10-0-0-105 ~]# hadoop fs -put input.txt /user/root/wordcount/
[root@ip-10-0-0-105 ~]# hadoop fs -ls /user/root/wordcount/
Found 1 items
-rw-r--r--   3 root supergroup         86 2018-02-18 10:06 /user/root/wordcount/input.txt
[root@ip-10-0-0-105 ~]#
```

- Now, create a new directory 'test_classes' using the 'mkdir' command to store the class files after the compilation of the Java code.

  [root@ip-10-0-0-105 ~]# **mkdir test_classes**

- Set the environment variable for the Hadoop classpath using the below command:

  [root@ip-10-0-0-105 ~]# **export HADOOP_CLASSPATH=$(hadoop classpath)**

```
[root@ip-10-0-0-105 ~]# mkdir test_classes
[root@ip-10-0-0-105 ~]# export HADOOP_CLASSPATH=$(hadoop classpath)
[root@ip-10-0-0-105 ~]#
```

- Run the classpath using the following command:

  [root@ip-10-0-0-105 ~]# **javac -classpath ${HADOOP_CLASSPATH} -d /root/test_classes WordCount.java**

```
[root@ip-10-0-0-105 ~]# javac -classpath ${HADOOP_CLASSPATH} -d /root/test_classes WordCount.java
[root@ip-10-0-0-105 ~]#
```

- Verify whether the classes have been created or not after the compilation of the Java code.

  [root@ip-10-0-0-105 ~]# **cd test_classes/**

  [root@ip-10-0-0-105 test_classes]# **ls**

  You can see that the classes have been created.

```
[root@ip-10-0-0-105 ~]# cd test_classes/
[root@ip-10-0-0-105 test_classes]# ls
WordCount.class  WordCount$IntSumReducer.class  WordCount$TokenizerMapper.class
[root@ip-10-0-0-105 test_classes]#
```

- Go back from the test_classes directory using 'cd ..' command.

  [root@ip-10-0-0-105 test_classes]# **cd ..**

  [root@ip-10-0-0-105 ~]#

```
[root@ip-10-0-0-105 test_classes]# ls
WordCount.class  WordCount$IntSumReducer.class  WordCount$TokenizerMapper.class
[root@ip-10-0-0-105 test_classes]# cd ..
[root@ip-10-0-0-105 ~]#
```

Creating a JAR file

- To create a JAR file, run the command shown below:

  The syntax for creating a jar file is:

  jar -cvf jarname.jar -C classfolder_name / .

  [root@ip-10-0-0-105 ~]# **jar -cvf WordCount.jar -C test_classes/ .**

```
[root@ip-10-0-0-105 ~]# jar -cvf WordCount.jar -C test_classes/ .
added manifest
adding: WordCount$TokenizerMapper.class(in = 1736) (out= 755)(deflated 56%)
adding: WordCount$IntSumReducer.class(in = 1739) (out= 741)(deflated 57%)
adding: WordCount.class(in = 1501) (out= 809)(deflated 46%)
[root@ip-10-0-0-105 ~]#
```

Running the JAR file using hadoop jar commands

- Run the JAR file created in the above step using the command shown below:

  Syntax: hadoop jar <JARfile name> <classfile> <input path> <output path>

  [root@ip-10-0-0-105 ~]# **hadoop jar WordCount.jar WordCount /user/root/wordcount/input.txt /user/root/wordcount/output**

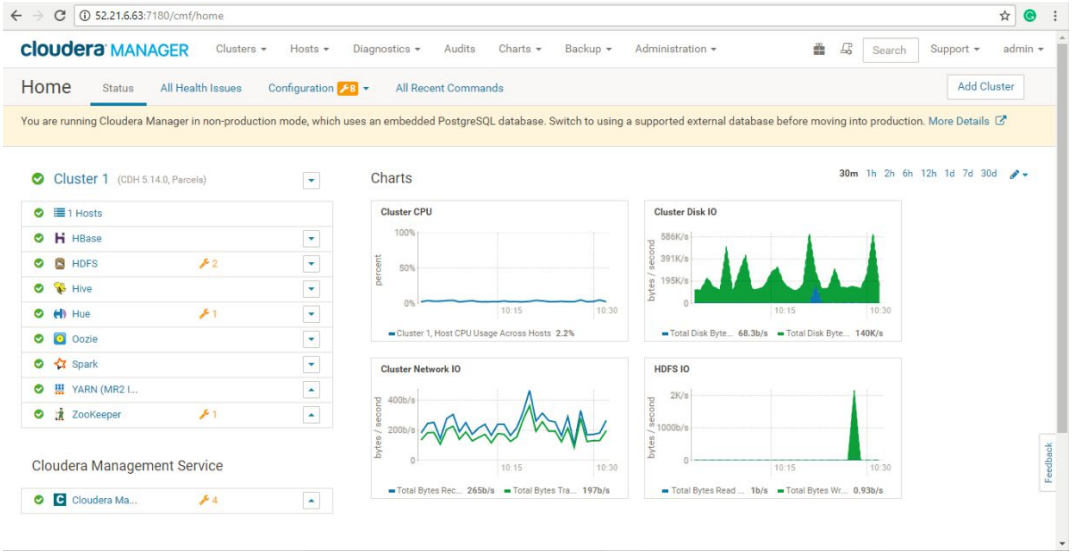
```
[root@ip-10-0-0-105 ~]# hadoop jar WordCount.jar WordCount /user/root/wordcount/input.txt /user/root/wordcount/output
18/02/18 10:27:10 INFO client.RMProxy: Connecting to ResourceManager at ip-10-0-0-105.ec2.internal/10.0.0.105:8032
18/02/18 10:27:10 WARN mapreduce.JobResourceUploader: Hadoop command-line option parsing not performed. Implement the Tool interface and execute your application with T
oolRunner to remedy this.
18/02/18 10:27:11 INFO input.FileInputFormat: Total input paths to process : 1
18/02/18 10:27:11 INFO mapreduce.JobSubmitter: number of splits:1
18/02/18 10:27:11 INFO mapreduce.JobSubmitter: Submitting tokens for job: job_1518938193435_0001
18/02/18 10:27:12 INFO impl.YarnClientImpl: Submitted application application_1518938193435_0001
18/02/18 10:27:12 INFO mapreduce.Job: The url to track the job: http://ip-10-0-0-105.ec2.internal:8088/proxy/application_1518938193435_0001/
18/02/18 10:27:12 INFO mapreduce.Job: Running job: job_1518938193435_0001
```

  As you can see, the process gets stuck. To kill the process, use ‘Ctrl+C’.

```
^C[root@ip-10-0-0-105 ~]#
```

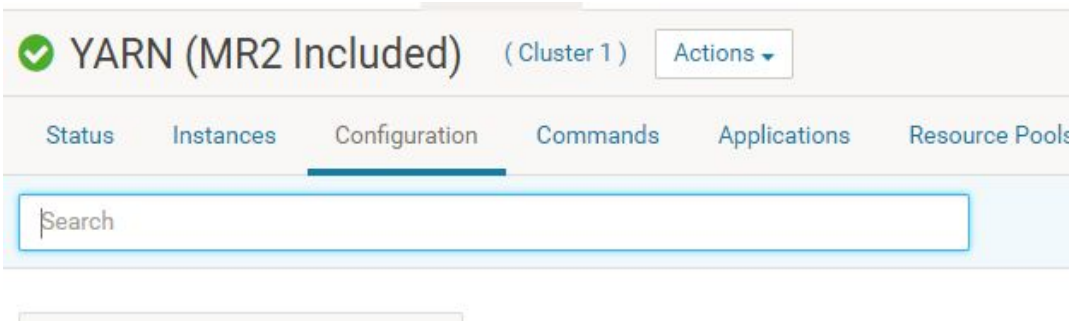
- To solve this problem, we need to visit the YARN Configuration page and edit a few properties.
  1. Go to your browser and open cloudera manager. To access the cloudera manager page, enter your public ip address followed by ‘:7180’ as shown below:

     <**Your Public IP**>:7180



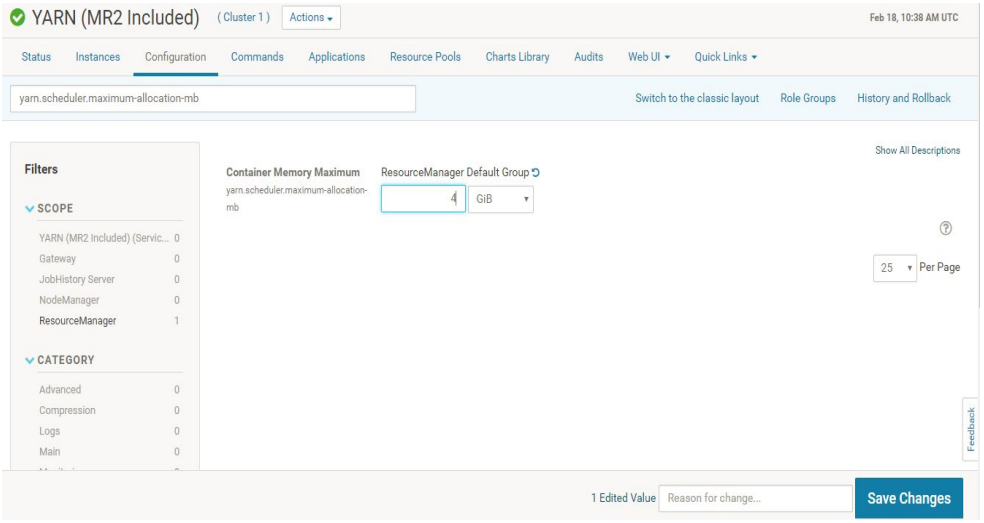
2. Click on '**YARN (MR2 Included)**' after which the following page appears:

3. Click on '**Configuration**'.



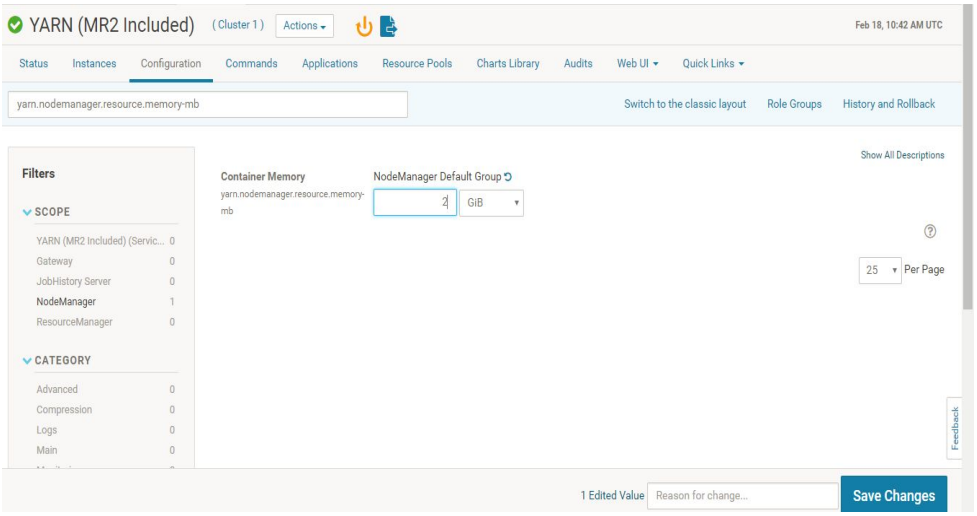
4. Now we have to increase the RAM. To do so, enter the following properties in the search tab. Increase the RAM of each property to the number mentioned below:
    a. **yarn.scheduler.maximum-allocation-mb**

The default value is 1 GB. Change it to 4GB and then click on 'Save Changes'.

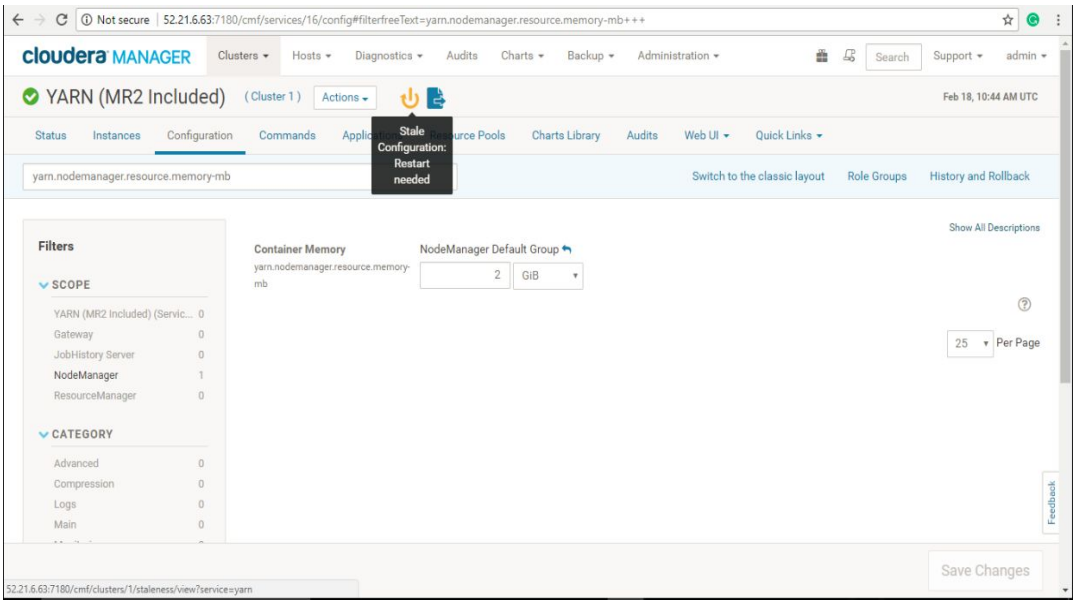


b. **yarn.nodemanager.resource.memory-mb**

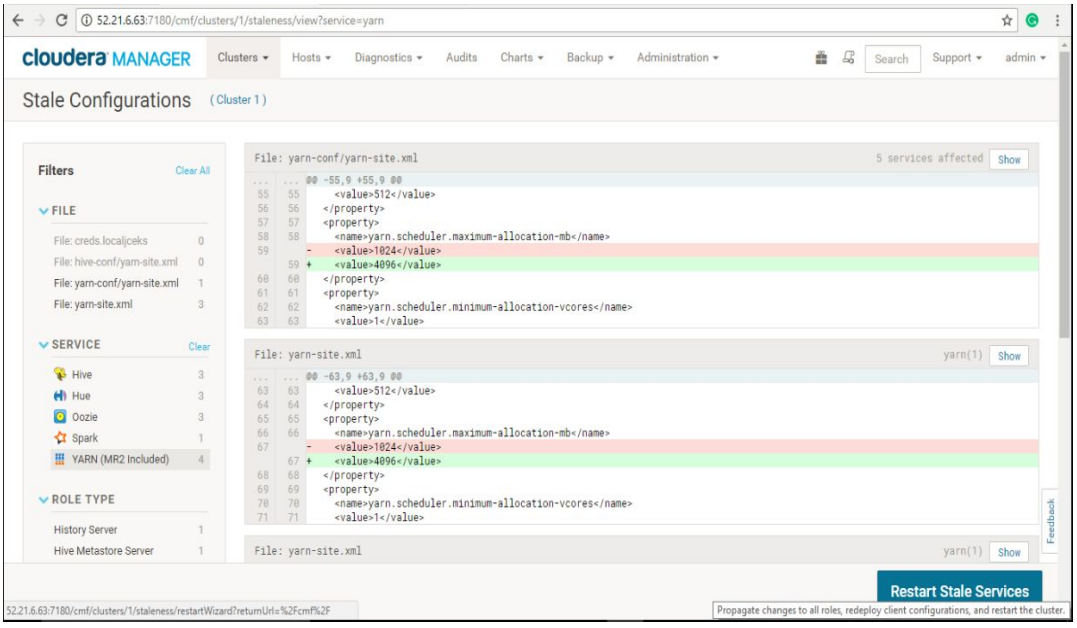
The default value is 1 GB. Change it to 2GB and then click on 'Save Changes'.



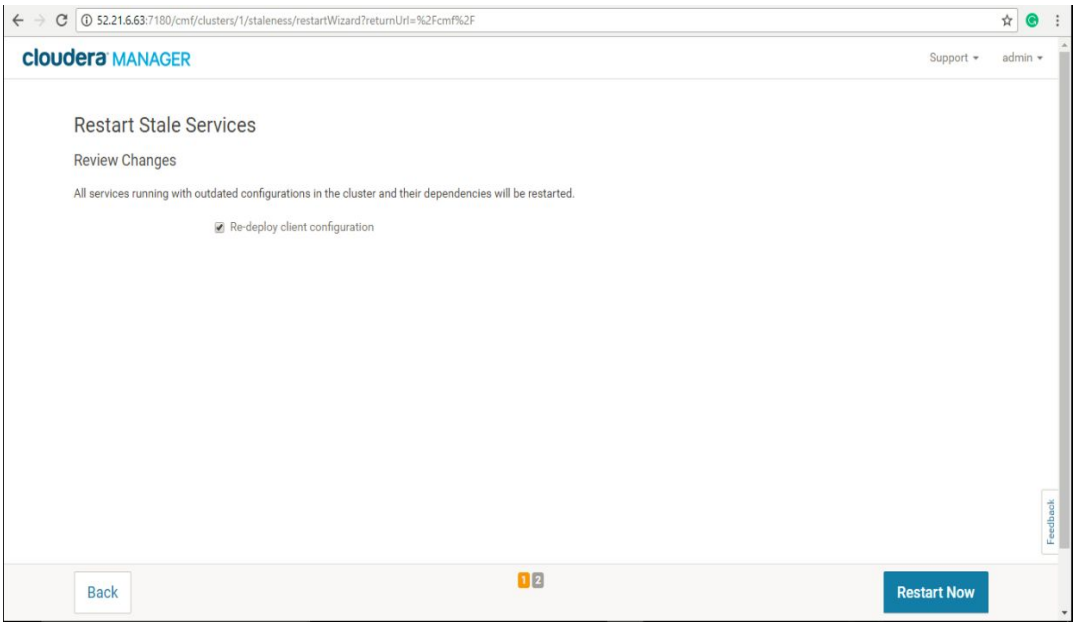
5. Restart the YARN service by clicking on the '**State Configuration Restart needed**' icon as shown in the image below:



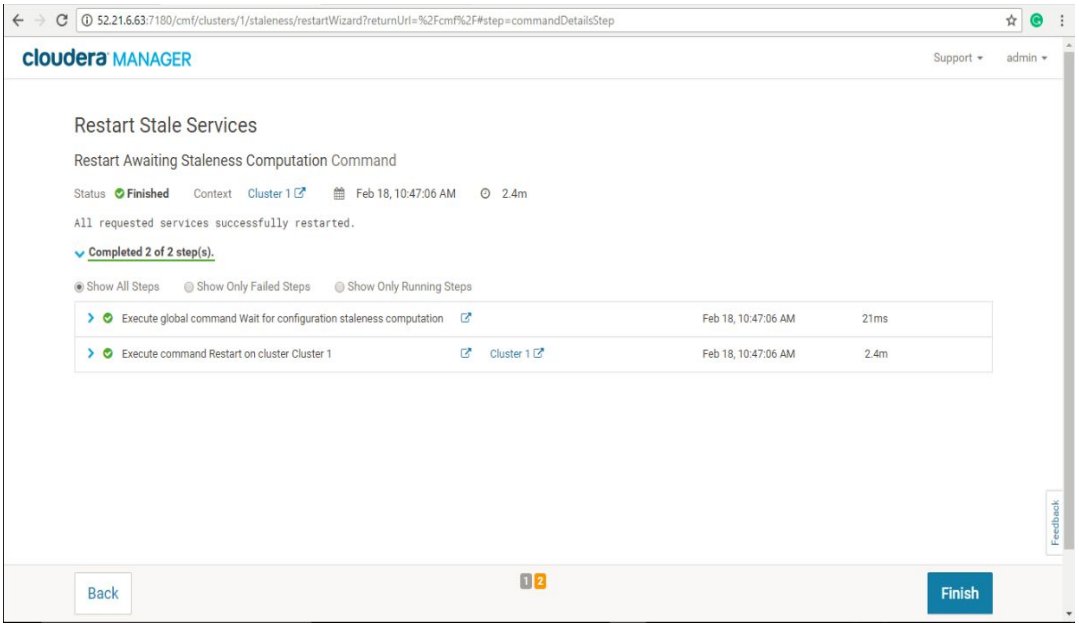
6. Now, click on '**Restart Stale services**'.



7. Click on '**Restart Now**'.



8. It generally takes a few minutes to restart the service. Wait till both the green ticks appear. Click on '**Finish**'.



9. Verify that the properties have been changed to the respective values shown below:

a. yarn.scheduler.maximum-allocation-mb - 4GB
b. yarn.nodemanager.resource.memory-mb - 2GB

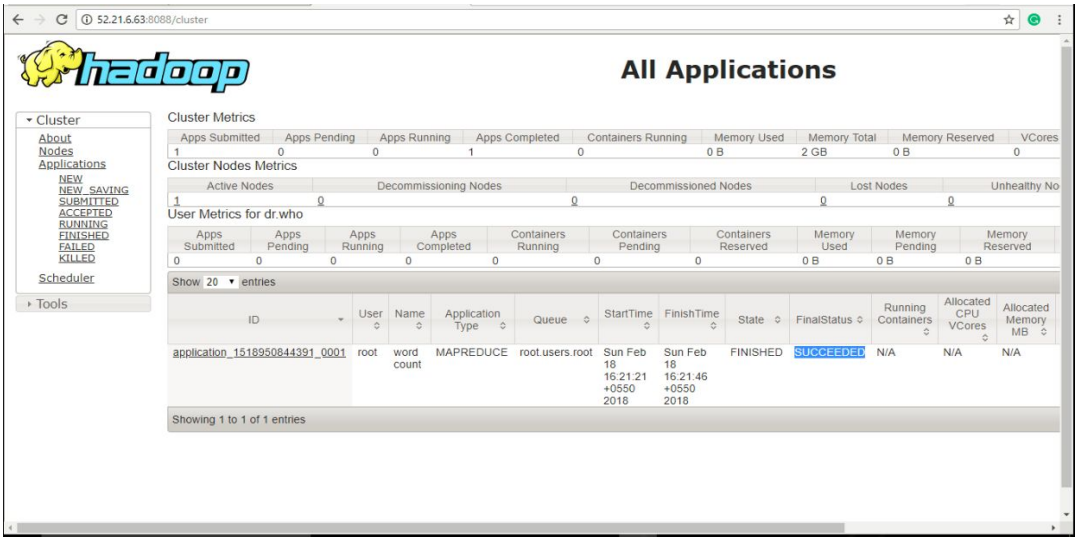
Running the JAR file and checking its output

- Now, again run the JAR file using the command shown below:

  [root@ip-10-0-0-105 ~]# **hadoop jar WordCount.jar WordCount /user/root/wordcount/input.txt /user/root/wordcount/output**

```
root@ip-10-0-0-105 ~]# hadoop jar WordCount.jar WordCount /user/root/wordcount/input.txt /user/root/wordcount/output
02/18 10:51:20 INFO client.RMProxy: Connecting to ResourceManager at ip-10-0-0-105.ec2.internal/10.0.0.105:8032
02/18 10:51:20 WARN mapreduce.JobResourceUploader: Hadoop command-line option parsing not performed. Implement the Tool interface and execute your application
Runner to remedy this.
02/18 10:51:20 INFO input.FileInputFormat: Total input paths to process : 1
02/18 10:51:21 INFO mapreduce.JobSubmitter: number of splits:1
02/18 10:51:21 INFO mapreduce.JobSubmitter: Submitting tokens for job: job_1518950844391_0001
02/18 10:51:21 INFO impl.YarnClientImpl: Submitted application application_1518950844391_0001
02/18 10:51:21 INFO mapreduce.Job: The url to track the job: http://ip-10-0-0-105.ec2.internal:8088/proxy/application_1518950844391_0001/
02/18 10:51:21 INFO mapreduce.Job: Running job: job_1518950844391_0001
02/18 10:51:30 INFO mapreduce.Job: Job job_1518950844391_0001 running in uber mode : false
02/18 10:51:30 INFO mapreduce.Job:  map 0% reduce 0%
02/18 10:51:35 INFO mapreduce.Job:  map 100% reduce 0%
02/18 10:51:42 INFO mapreduce.Job:  map 100% reduce 50%
02/18 10:51:47 INFO mapreduce.Job:  map 100% reduce 100%
02/18 10:51:47 INFO mapreduce.Job: Job job_1518950844391_0001 completed successfully
02/18 10:51:47 INFO mapreduce.Job: Counters: 49
     File System Counters
             FILE: Number of bytes read=173
             FILE: Number of bytes written=446400
             FILE: Number of read operations=0
             FILE: Number of large read operations=0
             FILE: Number of write operations=0
             HDFS: Number of bytes read=219
             HDFS: Number of bytes written=93
             HDFS: Number of read operations=9
             HDFS: Number of large read operations=0
             HDFS: Number of write operations=4
     Job Counters
             Launched map tasks=1
             Launched reduce tasks=2
             Data-local map tasks=1
             Total time spent by all maps in occupied slots (ms)=3387
             Total time spent by all reduces in occupied slots (ms)=7043
             Total time spent by all map tasks (ms)=3387
             Total time spent by all reduce tasks (ms)=7043
             Total vcore-milliseconds taken by all map tasks=3387
             Total vcore-milliseconds taken by all reduce tasks=7043
             Total megabyte-milliseconds taken by all map tasks=3468288
             Total megabyte-milliseconds taken by all reduce tasks=7212032
     Map-Reduce Framework
             Map input records=1
             Map output records=17
```

- Verify whether the program ran successfully by accessing the Resource Manager (RM).
    1. Access the Resource Manager by typing your Public IP address followed by ':8088' as shown: <**Your Public IP**>:8088



    2. As highlighted in the above image, it should show '**SUCCEEDED'**.

- To check the output of the WordCount program, follow these steps:
    1. We need to access Hue. There are 2 ways to do so:
        a. Direct Access - using your Public IP followed by ':8088' as shown below:

           <**Public IP**>:8088

           Username: admin

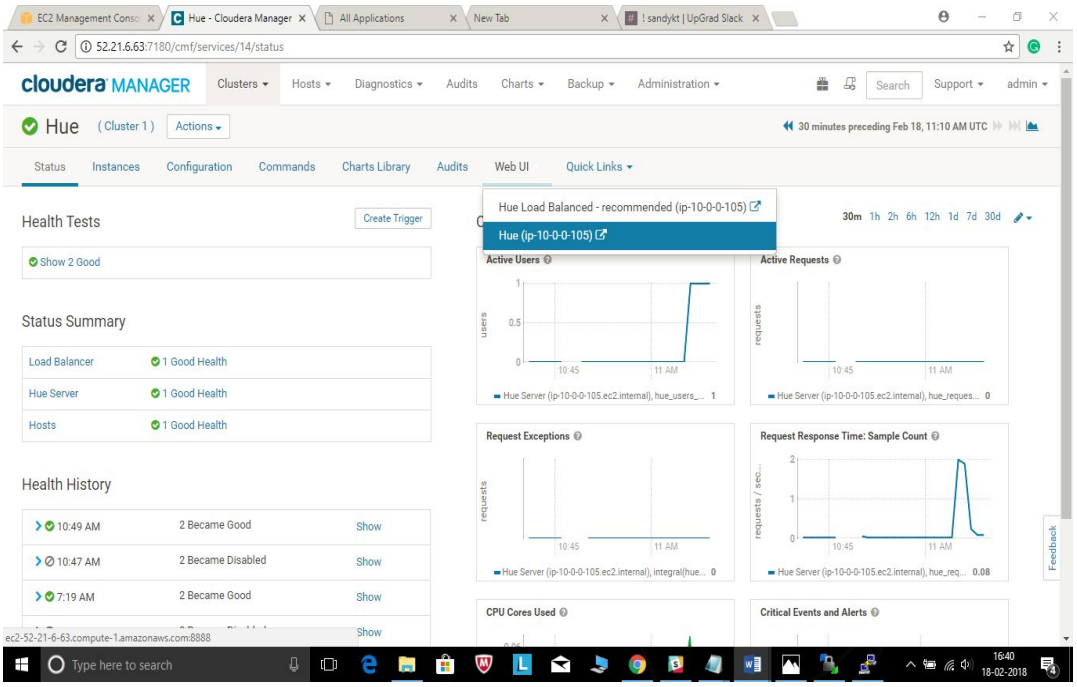
           Password: admin

        b. Cloudera Manager

           Access Cloudera Manager by typing your Public IP address followed by ':7180' as shown below:

           <**Public IP**>:7180

    2. Click on 'Web UI' and select the second option for Hue.

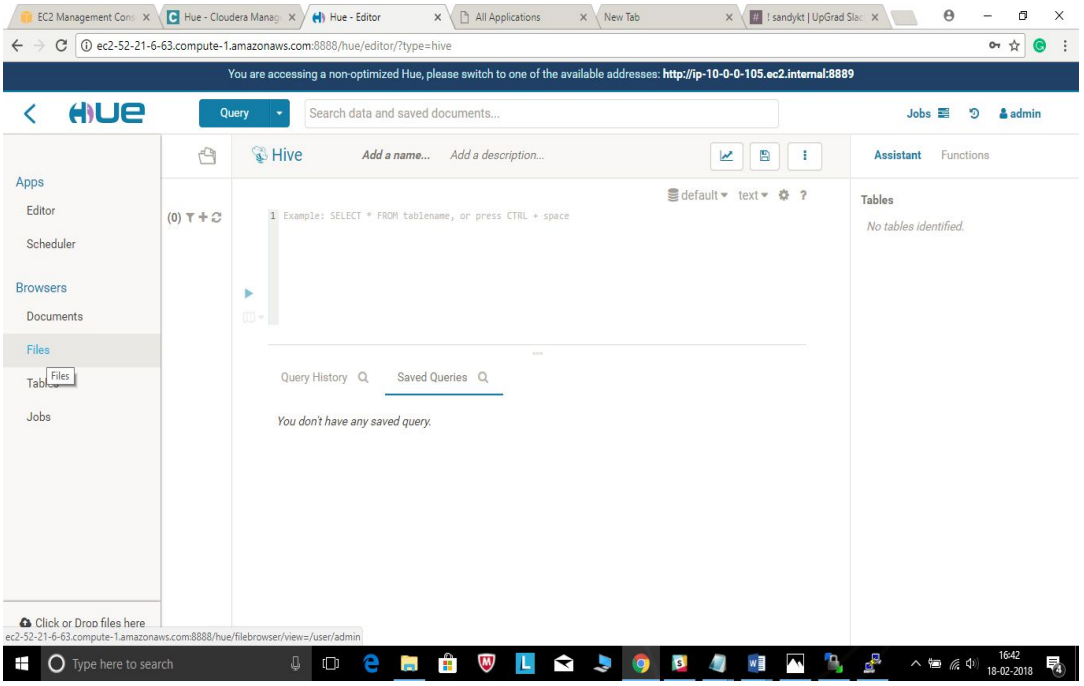


3. After clicking on Hue, login using the following credentials:

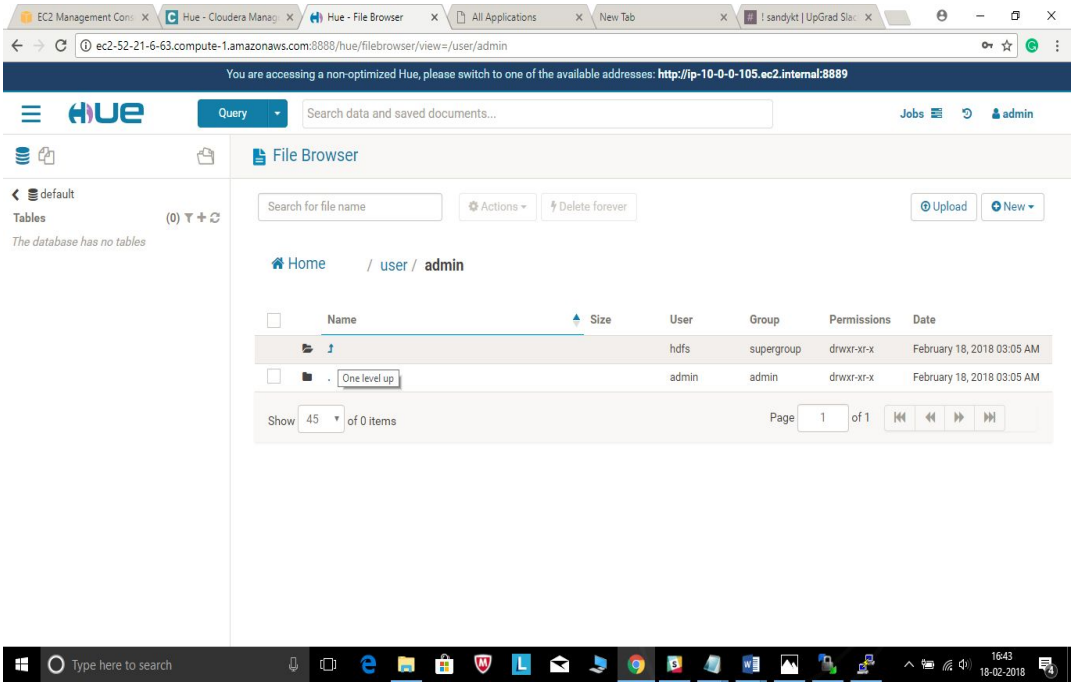
   Username: admin

   Password: admin

   Then, click on '**Files**'.



4. Click on ↥ icon as shown in the image.



5. Click on '**root**'.

Home / user

Name	Size	User	Group	Permissions	Date
↑		hdfs	supergroup	drwxr-xr-x	February 17, 2018 11:16 PM
.		hdfs	supergroup	drwxr-xr-x	February 18, 2018 03:05 AM
admin		admin	admin	drwxr-xr-x	February 18, 2018 03:05 AM
history		mapred	hadoop	drwxrwxrwx	February 17, 2018 11:16 PM
hive		hive	hive	drwxrwxr-xt	February 17, 2018 11:17 PM
hue		hue	hue	drwxrwxr-x	February 17, 2018 11:18 PM
oozie		oozie	oozie	drwxrwxr-x	February 17, 2018 11:18 PM
root		root	supergroup	drwxr-xr-x	February 18, 2018 02:27 AM
spark		spark	spark	drwxr-x--x	February 17, 2018 11:17 PM

6. Click on '**wordcount**'.

Home / user / root

Name	Size	User	Group	Permissions	Date
↑		hdfs	supergroup	drwxr-xr-x	February 18, 2018 03:05 AM
.		root	supergroup	drwxr-xr-x	February 18, 2018 02:27 AM
.staging		root	supergroup	drwx------	February 18, 2018 02:51 AM
wordcount		root	supergroup	drwxr-xr-x	February 18, 2018 02:51 AM

Show 45 of 2 items Page 1 of 1

7. Then, click on '**output**'.

Home / user / root / wordcount

Name	Size	User	Group	Permissions	Date
↑		root	supergroup	drwxr-xr-x	February 18, 2018 02:27 AM
.		root	supergroup	drwxr-xr-x	February 18, 2018 02:51 AM
input.txt	86 bytes	root	supergroup	-rw-r--r--	February 18, 2018 02:06 AM
output		root	supergroup	drwxr-xr-x	February 18, 2018 02:51 AM

Show 45 of 2 items Page 1 of 1

8. Finally, click on '**part-r-00000**' and '**part-r-00001**' and verify the output.

Home / user / root / wordcount / **output**

	Name	Size	User	Group	Permissions	Date
	↑		root	supergroup	drwxr-xr-x	February 18, 2018 02:51 AM
	.		root	supergroup	drwxr-xr-x	February 18, 2018 02:51 AM
	_SUCCESS	0 bytes	root	supergroup	-rw-r--r--	February 18, 2018 02:51 AM
	part-r-00000	49 bytes	root	supergroup	-rw-r--r--	February 18, 2018 02:51 AM
	part-r-00001	44 bytes	root	supergroup	-rw-r--r--	February 18, 2018 02:51 AM

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