EXP. 23: INSTALL HADOOP 2.X AND CONFIGURE THE NAME NODE AND DATA NODE.

AIM: INSTALL HADOOP 2.X AND CONFIGURE THE NAME NODE AND DATA NODE.

PROCEDURE:

Step 7 - Modify Hadoop config files

//Hadoop Environmental variable setting – The following files will be modified

1. ~/.bashrc

2. /usr/local/hadoop/hadoop-2.7.2/etc/hadoop/hadoop-env.sh

3. /usr/local/hadoop/hadoop-2.7.2/etc/hadoop/core-site.xml

4. /usr/local/hadoop/hadoop-2.7.2/etc/hadoop/hdfs-site.xml

5. /usr/local/hadoop/hadoop-2.7.2/etc/hadoop/yarn-site.xml

6. /usr/local/hadoop/hadoop-2.7.2/etc/hadoop/mapred-site.xml.template

$ sudo nano ~/.bashrc

// Add the following lines at the end of the file

// Configure Hadoop Files

$ cd /usr/local/hadoop/hadoop-2.7.2/etc/hadoop/

$ sudo nano hadoop-env.sh

// Add following line in hadoop-env.sh – Set JAVA variable in Hadoop

// Create datanode and namenode

$ sudo mkdir –p /usr/local/hadoop_tmp/hdfs/namenode

$ sudo mkdir –p /usr/local/hadoop_tmp/hdfs/datanode

// Changing ownership to hadoop_tmp

$ sudo chown –R hduser:hadoop /usr/local/hadoop_tmp

// Edit hdfs-site.xml

$ sudo nano hdfs-site.xml

// Add the following lines between <configuration> …… </configuration>

// Edit core-site.xml

$ sudo nano core-site.xml

// Add the following lines between <configuration> …… </configuration>

// Edit mapred-site.xmsudo

$ cp /usr/local/hadoop/hadoop-2.7.2/etc/hadoop/mapred-site.xml.template

/usr/local/hadoop/hadoop-2.7.2/etc/hadoop/mapred-site.xml

$ sudo nano mapred-site.xml

// Add the following lines between <configuration> …… </configuration>

Step-8 – Format Hadoop File System

$ cd /usr/local/hadoop/hadoop-2.7.2/bin

$ hadoop namenode -format

Step 9 - Start Hadoop

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

// Starting dfs services

$ start-dfs.sh

// Starting mapreduce services

$ start-yarn.sh

$ jps

Step 10 - 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 11 - Stop Hadoop

$ stop-dfs.sh

$ stop-yarn.sh

IMPLEMENTAION:

```
  GNU nano 2.2.6                                    File: /home/hduser/.bashrc


# See /usr/share/doc/bash-doc/examples in the bash-doc package.

if [ -f ~/.bash_aliases ]; then
    . ~/.bash_aliases
fi

# enable programmable completion features (you don't need to enable
# this, if it's already enabled in /etc/bash.bashrc and /etc/profile
# sources /etc/bash.bashrc).
if ! shopt -oq posix; then
  if [ -f /usr/share/bash-completion/bash_completion ]; then
    . /usr/share/bash-completion/bash_completion
  elif [ -f /etc/bash_completion ]; then
    . /etc/bash_completion
  fi
fi


#HADOOP VARIABLES START
export JAVA_HOME=/usr/lib/jvm/java-7-openjdk-amd64
export HADOOP_INSTALL=/usr/local/hadoop
export PATH=$PATH:$HADOOP_INSTALL/bin
export PATH=$PATH:$HADOOP_INSTALL/sbin
export HADOOP_MAPRED_HOME=$HADOOP_INSTALL
export HADOOP_COMMON_HOME=$HADOOP_INSTALL
export HADOOP_HDFS_HOME=$HADOOP_INSTALL
export YARN_HOME=$HADOOP_INSTALL
export HADOOP_COMMON_LIB_NATIVE_DIR=$HADOOP_INSTALL/lib/native
export HADOOP_OPTS="-Djava.library.path=$HADOOP_INSTALL/lib"
#HADOOP VARIABLES END
```
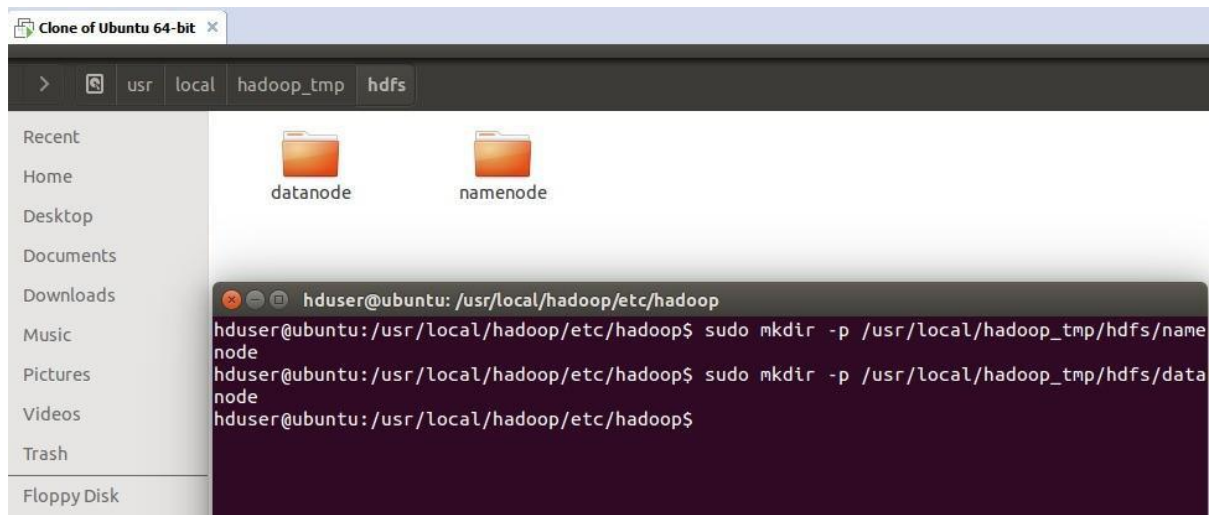
```
hduser@ubuntu:/home$ cd ..
hduser@ubuntu:/$ cd usr
hduser@ubuntu:/usr$ cd local
hduser@ubuntu:/usr/local$ cd hadoop
hduser@ubuntu:/usr/local/hadoop$ cd etc
hduser@ubuntu:/usr/local/hadoop/etc$ cd hadoop
hduser@ubuntu:/usr/local/hadoop/etc/hadoop$ ls
capacity-scheduler.xml        httpfs-env.sh              mapred-env.sh
configuration.xsl             httpfs-log4j.properties    mapred-queues.xml.template
container-executor.cfg        httpfs-signature.secret    mapred-site.xml
core-site.xml                 httpfs-site.xml            mapred-site.xml.template
hadoop-env.cmd                kms-acls.xml               slaves
hadoop-env.sh                 kms-env.sh                 ssl-client.xml.example
hadoop-metrics2.properties    kms-log4j.properties       ssl-server.xml.example
hadoop-metrics.properties     kms-site.xml               yarn-env.cmd
hadoop-policy.xml             log4j.properties           yarn-env.sh
hdfs-site.xml                 mapred-env.cmd             yarn-site.xml
hduser@ubuntu:/usr/local/hadoop/etc/hadoop$
```

RESULT:

To Install Hadoop 2.X And Configure The Name Node And Data Node have successfully implemented