Hbase Installation 0.98.0

NOTE: If a dedicated Hadoop user is present (hduser), Hbase needs to be installed in that user account. The guide below assumes Hadoop is installed.

Download and Install Hbase:
-- Switch to appropriate user where Hadoop is installed: $su hduser
-- Go to the home directory: $cd ~
-- Download Hbase using the command: $wget http://archive.apache.org/dist/hbase/hbase-0.98.9/hbase-0.98.9-hadoop2-bin.tar.gz
-- If the above link fails to work, download Hbase from the apache website (tar.gz file).
-- Unzip the folder with the command: $tar -xvzf hbase-0.98.9-hadoop2-bin.tar.gz
-- The above command will create a new Hbase file (hbase-0.98.9-hadoop2), to check use the command: $ls -l
-- Rename the unzipped folder to "hbase": $mv hbase-0.98.9-hadoop2 hbase
-- Check the present working director: $pwd #should be /home/user or similar
-- Move Hbase folder from pwd to /usr/local: $sudo mv /home/hduser/hbase /usr/local/hbasea
-- Change owner of Hbase folder in /usr/local to the Hadoop user (hduser in this case): $sudo chown -R hduser:hadoop /usr/local/hbase
-- To check permissions of the Hbase folder, go to /usr/local and enter the command: $ls -al

Create a Hbase directory in Hadoop:
-- To start Hadoop use the following command: $start-all.sh
-- To check if Hadoop services are running, use the command: $jps
-- The above command should show a minimum of 5 services running, namely - DataNode, NodeManager, SecondaryNameNode, ResourceManager, NameNode
-- Make a user directory inside HDFS: $hadoop fs -mkdir /user
-- Make a hbase directory inside user: $hadoop fs -mkdir /user/hbase
-- Make a hbase-data directory inside user: $hadoop fs -mkdir /user/hbase/hbase-data
-- Open a web-browser and enter the URL http://localhost:50070/
-- To check the files in HDFS, go to Utilities -> Browse the file system in the webpage.

Setup Hbase Configuration Files:
A total of 3 configurations files have to be modified to complete the Hive setup.

File1: .bashrc
-- Switch to the Hadoop user where Hbase is installed (hduser in this case): $su hduser
-- Go to the home directory inside hduser: $cd ~
-- Check if the .bashrc file exists: $ls -al
-- Open the .bashrc file using gedit/nano/vi: $sudo gedit .bashrc #Used gedit in this case

-- Append the following code to the end of the .bashrc file:

```
#HBASE VARIABLES START
export HBASE_HOME=/usr/local/hbase
export PATH="$JAVA_HOME/bin:$HBASE_HOME/bin:/usr/local/bin:/usr/local/sbin:$PATH"
export PATH="$JAVA_HOME:$PATH"
#HBASE VARIABLES END
```

-- Make sure the above syntax is identical with the spacing between the variables and =
-- Save and close the .bashrc file.
-- Run the following command in the terminal: $source ~/.bashrc

File2: hbase-site.xml
-- The hbase-site.xml is located in the conf directory of the installation root.
-- Switch to the Hadoop user where Hbase is installed (hduser in this case): $su hduser
-- Go to the following directory inside hduser: $cd /usr/local/hbase/conf
-- Open the hbase-site.xml file using gedit/nano/vi: $sudo gedit hbase-site.xml
-- Add the following code between the <configuration></configuration> xml tags:

```
<property>
        <name>hbase.rootdir</name>
        <value>hdfs://localhost:54310/user/hbase/hbase-data</value>
</property>
<property>
        <name>hbase.zookeeper.property.dataDir</name>
        <value>/usr/local/hbase/zookeeper</value>
</property>
<property>
        <name>dfs.replication</name>
        <value>1</value>
</property>
<property>
        <name>hbase.zookeeper.property.clientPort</name>
        <value>2222</value>
</property>
<property>
        <name>hbase.zookeeper.quorum</name>
        <value>localhost</value>
</property>
```

-- Make sure the above syntax is identical.
-- Save and close the hbase-site.xml file.

File3: hbase-env.sh
-- The hbase-env.sh file is modified to allow Hbase to manage its own instance of the zookeeper
-- The hbase-env.sh is located in the conf directory of the installation root
-- Switch to the Hadoop user where hbase is installed (hduser in this case): $su hduser
-- Go to the following directory inside hduser: $cd /usr/local/hbase/conf
-- Open the hbase-env.sh file using gedit/nano/vi: $sudo gedit hbase-env.sh
-- Search for the line export HBASE_MANAGES_ZK=true and uncomment the line (remove #)
-- Save the file and exit.

Start Hbase:
-- Start Hadoop first: $start-all.sh # Execute only if Hadoop installed
-- Run the command: $start-hbase.sh
-- To start Hbase, use the command: $hbase shell