

**This document will guide you regarding how to install Apache Hadoop with My Sql + SQoop installation.**

# ****Prerequisites: Centos 7.X****

vi /etc/hosts

192.168.X.X sqoop.com

**Download java:-**

# curl -LO -H "Cookie: oraclelicense=accept-securebackup-cookie" <http://download.oracle.com/otn-pub/java/jdk/8u92-b14/jdk-8u92-linux-x64.rpm>

**Install package**

# rpm -Uvh jdk-8u92-linux-x64.rpm

**Create a new user account on your system**

# useradd -d /opt/hadoop hadoop

# passwd hadoop

**Download Hadoop Latest version**

# wget <http://apache.javapipe.com/hadoop/common/hadoop-2.7.6/hadoop-2.7.6.tar.gz>

**Extract :-**

# tar xfz hadoop-2.7.6.tar.gz

# cp -rf hadoop-2.7.6/\* /opt/hadoop/

# chown -R hadoop:hadoop /opt/hadoop/

# su - hadoop

**Setting up Env:-**

# cd /opt/hadoop

# vi .bash\_profile

**Append the following lines at the end of the file**:

**## JAVA env variables**

export JAVA\_HOME=/usr/java/default

export PATH=$PATH:$JAVA\_HOME/bin

export CLASSPATH=.:$JAVA\_HOME/jre/lib:$JAVA\_HOME/lib:$JAVA\_HOME/lib/tools.jar

**## HADOOP env variables**

export HADOOP\_HOME=/opt/hadoop

export HADOOP\_COMMON\_HOME=$HADOOP\_HOME

export HADOOP\_HDFS\_HOME=$HADOOP\_HOME

export HADOOP\_MAPRED\_HOME=$HADOOP\_HOME

export HADOOP\_YARN\_HOME=$HADOOP\_HOME

export HADOOP\_OPTS="-Djava.library.path=$HADOOP\_HOME/lib/native"

export HADOOP\_COMMON\_LIB\_NATIVE\_DIR=$HADOOP\_HOME/lib/native

export PATH=$PATH:$HADOOP\_HOME/sbin:$HADOOP\_HOME/bin

**Intialize Env:-**

# source .bash\_profile

# echo $HADOOP\_HOME

# echo $JAVA\_HOME

**Openssh:-**

# ssh-keygen -t rsa

# ssh-copy-id sqoop.com

**Now , We will change in the core Hadoop files**:-

# vi etc/hadoop/core-site.xml

<property>

<name>fs.defaultFS</name>

<value>hdfs://sqoop.com:9000/</value>

</property>

# vi etc/hadoop/hdfs-site.xml

<property>

<name>dfs.data.dir</name>

<value>file:///opt/volume/datanode</value>

</property>

<property>

<name>dfs.name.dir</name>

<value>file:///opt/volume/namenode</value>

</property>

**Create a folder which we declare above in the hdfs\_site.xml file**

$ su root

# mkdir -p /opt/volume/namenode

# mkdir -p /opt/volume/datanode

# chown -R hadoop:hadoop /opt/volume/

# vi etc/hadoop/mapred-site.xml

<?xml version="1.0"?>

<?xml-stylesheet type="text/xsl" href="configuration.xsl"?>

<configuration>

<property>

<name>mapreduce.framework.name</name>

<value>yarn</value>

</property>

</configuration>

# vi etc/hadoop/yarn-site.xml

<property>

<name>yarn.nodemanager.aux-services</name>

<value>mapreduce\_shuffle</value>

</property>

**Setup Java Home for Hadoop-env.sh**

#vi etc/hadoop/hadoop-env.sh

export JAVA\_HOME=/usr/java/default/

**Hadop name node Format:-**

# hdfs namenode -format

# start-dfs.sh

# start-yarn.sh

# jps

#################### **My Sql Installation** ######################

# cd /opt/hadoop

# wget <https://dev.mysql.com/get/mysql57-community-release-el7-9.noarch.rpm>

**Now, install the package:-**

**Su – root**

**Cd /opt/hadoop**

# sudo rpm -ivh mysql57-community-release-el7-9.noarch.rpm

# sudo yum install mysql-server

1. Stop mysql:

systemctl stop mysqld

2. Set the mySQL environment option

systemctl set-environment MYSQLD\_OPTS="--skip-grant-tables"

3. Start mysql usig the options you just set

systemctl start mysqld

4. Login as root

mysql -u root

5. Update the root user password with these mysql commands

mysql> UPDATE mysql.user SET authentication\_string = PASSWORD('MyNewPassword')

-> WHERE User = 'root' AND Host = 'localhost';

mysql> FLUSH PRIVILEGES;

mysql> quit

\*\*\* Edit \*\*\*

As mentioned my shokulei in the comments, for 5.7.6 and later, you should use

mysql> ALTER USER 'root'@'localhost' IDENTIFIED BY 'MyNewPass';

Or you'll get a warning

6. Stop mysql

systemctl stop mysqld

7. Unset the mySQL envitroment option so it starts normally next time

systemctl unset-environment MYSQLD\_OPTS

8. Start mysql normally:

systemctl start mysqld

Try to login using your new password:

9. mysql -u root -p

**Creating a database:-**

# CREATE DATABASE sqoop;

**Show database:-**

# SHOW DATABASES;

**Create a new MySQL table:**

**This below database we are creating for SQOOP “Import “.**

**#** use sqoop;

**(created database name , in our case database name “sqoop”)**

**#** CREATE TABLE potluck (id INT NOT NULL PRIMARY KEY AUTO\_INCREMENT,

name VARCHAR(20),

food VARCHAR(30),

confirmed CHAR(1),

signup\_date DATE);

**#** show tables;

# DESCRIBE potluck;

**Insert information into each row:-**

# INSERT INTO `potluck` (`id`,`name`,`food`,`confirmed`,`signup\_date`) VALUES (NULL, "Sandy", "Key Lime Tarts","N", '2012-04-14');

# INSERT INTO `potluck` (`id`,`name`,`food`,`confirmed`,`signup\_date`) VALUES (NULL, "Tom", "BBQ","Y", '2012-04-18');

# INSERT INTO `potluck` (`id`,`name`,`food`,`confirmed`,`signup\_date`) VALUES (NULL, "Tina", "Salad","Y", '2012-04-10');

#SELECT \* FROM potluck;

**Creating table for SQOOP “Export“.**

# CREATE TABLE potluckExport (id INT NOT NULL PRIMARY KEY AUTO\_INCREMENT,

name VARCHAR(20),

food VARCHAR(30),

confirmed CHAR(1),

signup\_date DATE);

# select \* from potluckExport;

########################## **Sqoop Installtion**##################

**Down load TAR file from the below link.**

# cd /op t/hadoop

# wget <http://archive.apache.org/dist/sqoop/1.4.5/sqoop-1.4.5.bin__hadoop-2.0.4-alpha.tar.gz>

# su root

# tar -xvf sqoop-1.4.5.bin\_\_hadoop-2.0.4-alpha.tar.gz

# mv sqoop-1.4.5.bin\_\_hadoop-2.0.4-alpha /usr/lib/sqoop

**Open the .bash\_profile file and add the below lines:-**

**vi .bash\_profile**

export SQOOP\_HOME=/usr/lib/sqoop export

export PATH=$PATH:$SQOOP\_HOME/bin

#source .bash\_profile

**Copy the template file :-**

# cd $SQOOP\_HOME/conf

# mv sqoop-env-template.sh sqoop-env.sh

**Edit sqoop-env.sh file with the lines below:-**

export HADOOP\_COMMON\_HOME=/opt/hadoop

export HADOOP\_MAPRED\_HOME=/opt/hadoop

**Download and set the mysql-connector-java using the commands below:-**

**Copy under the dir. /opt/hadoop/**

**Wget** [**http://ftp.ntu.edu.tw/MySQL/Downloads/Connector-J/mysql-connector-java-5.1.45.tar.gz**](http://ftp.ntu.edu.tw/MySQL/Downloads/Connector-J/mysql-connector-java-5.1.45.tar.gz)

# tar -zxf mysql-connector-java-5.1.45.tar.gz

# cd mysql-connector-java-5.1.45

# mv mysql-connector-java-5.1.45-bin.jar /usr/lib/sqoop/lib

#cd $SQOOP\_HOME/bin

#sqoop-version

Now , We need to Import and Export tables using **“SQOOP”**

**For Importing Table:-**

# sqoop import --connect jdbc:mysql://localhost:3306/sqoop --username root --password Test@123 --table potluck --target-dir /opt/volume/potluck

**For Exporting Table:-**

**#** sqoop export --connect jdbc:mysql://localhost:3306/sqoop --username root --password Test@123 --table potluckExport --export-dir /opt/volume/potluck/part-m-00000

**This Lab is Done** 