Exp: 5

Installation of Hive

Aim:

To Download and install Hive, Understanding Startup scripts, Configuration files.

Procedure:

Step 1: Download and extract it

Download the Apache hive and extract it use tar, the commands given below:

$wgethttps://downloads.apache.org/hive/hive-3.1.2/apache-hive-3.1.2-bin.tar.gz

$ tar –xvf apache-hive-3.1.2-bin.tar.gz

Step 2: Place different configuration properties in Apache Hive

In this step, we are going to do two things

o Placing Hive Home path in bashrc file

$nano .bashrc

And append the below lines in it

```
export HIVE_HOME="/home/haresh/apache-hive-3.1.2-bin"
export HIVE_CONF_DIR=$HIVE_HOME/conf
export PATH=$PATH:$HIVE_HOME/bin
export HADOOP_USER_CLASSPATH_FIRST=true
```

2. Exporting Hadoop path in Hive-config.sh (To communicate with the Hadoop eco system we are defining Hadoop Home path in hive config field) Open the hiveconfig.sh as shown in below

$cd apache-hive-3.1.2-bin/bin

$cp hive-env.sh.template hive-env.sh

$nano hive-env.sh

Append the below commands on it

export HADOOP_HOME=/home/Hadoop/Hadoop

export HIVE_CONF_DIR=/home/Hadoop/apache-hive-3.1.2/conf

```
export HADOOP_HOME=$HADOOP_HOME
export HIVE_CONF_DIR=$HIVE_CONF_DIR
```

Step 3: Install mysql

1. Install mysql in Ubuntu by running this command:

$sudo apt update

$sudo apt install mysql-server

2. Alter username and password for MySQLby running below commands:

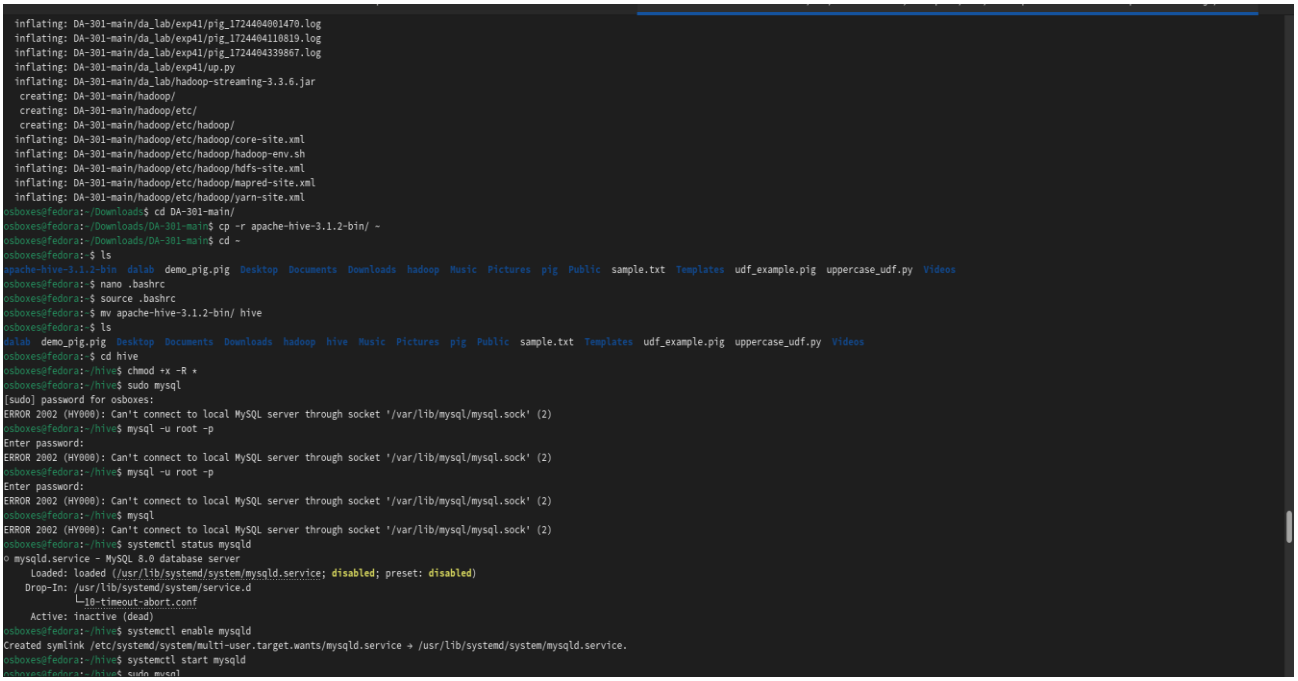
$sudo mysql

Pops command line interface for MySQLand run the below SQL queries to change username and set password

mysql> SELECT user, host, plugin FROM mysql.user WHERE user = 'root';

mysql> ALTER USER 'root'@'localhost' IDENTIFIED WITH 'mysql_native_password' BY 'your_new_password';

mysql> FLUSH PRIVILEGES;



Step 4:Config hive-site.xml

Config the hive-site.xml by appending this xml code and change the username and password according to your MySQL.

$cd apache-hive-3.1.2-bin/bin

$cp hive-default.xml.template hive-site.xml

$nano hive-site.xml

Append these lines into it

Replace root as your username of MySQL

Replaceyour_new_password as with your password of MySQL

```
<configuration>
<property>
<name>javax.jdo.option.ConnectionURL</name>
<value>jdbc:mysql://localhost/metastore?createDatabaseIfNotExist=true</value>
</property>
<property>
<name>javax.jdo.option.ConnectionDriverName</name>
<value>com.mysql.cj.jdbc.Driver</value>
</property>
<property>
<name>javax.jdo.option.ConnectionUserName</name>
<value>root</value>
</property>
<property>
<name>javax.jdo.option.ConnectionPassword</name>
<value>your_new_password</value>
</property>
<property>
<name>datanucleus.autoCreateSchema</name>
<value>true</value>
</property>
<property>
<name>datanucleus.fixedDatastore</name>
<value>true</value>
</property>
<property>
```

<name>datanucleus.autoCreateTables</name>

<value>True</value>

</property>

</configuration>

Step 5: Setup MySQL java connector:

First, you'll need to download the MySQL Connector/J, which is the JDBC driver for MySQL. You can download it from the below link

https://drive.google.com/file/d/1QFhB7Kvcat7a4LzDRe6GcmZva1yAxKz-/view?usp=drive_link

Copy the downloaded MySQL Connector/J JAR file to the Hive library directory. By default, the Hive library directory is usually located at/path/to/apache-hive-3.1.2/lib/on Ubuntu. Use the following command to copy the JAR file:

$sudo cp /path/to/mysql-connector-java-8.0.15.jar /path/to/apache-hive-3.1.2/lib/

Replace /path/to/ with the actual path to the JAR file.

Step 6:Initialize the Hive Metastore Schema:

Run the following command to initialize the Hive metastore schema:

$$HIVE_HOME/bin/schematool -initSchema -dbTypemysql

Step 7: Start hive:

You can test Hive by running the Hive shell: Copy code hive You should be able to run Hive queries, and metadata will be stored in your MySQL database.

$hive

```
osboxes@fedora:~/hive/conf$ gedit hive-site.xml
osboxes@fedora:~/hive/conf$ rm hive-site.xml
osboxes@fedora:~/hive/conf$ cp ~/Downloads/DA-301-main/apache-hive-3.1.2-bin/conf/hive-site.xml .
osboxes@fedora:~/hive/conf$ gedit hive-site.xml
osboxes@fedora:~/hive/conf$ schematool -initSchema -dbType mysql
SLF4J: Class path contains multiple SLF4J bindings.
SLF4J: Found binding in [jar:file:/home/osboxes/hive/lib/log4j-slf4j-impl-2.10.0.jar!/org/slf4j/impl/StaticLoggerBinder.class]
SLF4J: Found binding in [jar:file:/home/osboxes/hadoop/share/hadoop/common/lib/slf4j-reload4j-1.7.36.jar!/org/slf4j/impl/StaticLoggerBinder.class]
SLF4J: See http://www.slf4j.org/codes.html#multiple_bindings for an explanation.
SLF4J: Actual binding is of type [org.apache.logging.slf4j.Log4jLoggerFactory]
Metastore connection URL:        jdbc:mysql://localhost/metastore?createDatabaseIfNotExist=true&serverTimezone=UTC&useSSL=false&allowPublicKeyRetrieval=true
Metastore Connection Driver :    com.mysql.cj.jdbc.Driver
Metastore connection User:       root
Starting metastore schema initialization to 3.1.0
Initialization script hive-schema-3.1.0.mysql.sql
```

Result:

Thus, the Apache Hive installation is completed successfully.