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;

```
haresh@fedora:~$ mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 8
Server version: 8.0.39 Source distribution

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
```

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 Hivequeries, and metadata will be stored in your MySQL database.

$hive

```
haresh@fedora:~$ hive
which: no hbase in (/home/haresh/.local/bin:/home/haresh/bin:/usr/local/bin:/usr/local/sbin:/usr/bin:/u
sr/sbin:/home/haresh/hadoop/sbin:/home/haresh/hadoop/bin:/home/haresh/pig/bin:/home/haresh/apache-hive-
3.1.2-bin/bin:/home/haresh/hadoop/sbin:/home/haresh/hadoop/bin:/home/haresh/pig/bin:/home/haresh/apache
-hive-3.1.2-bin/bin)
SLF4J: Class path contains multiple SLF4J bindings.
SLF4J: Found binding in [jar:file:/home/haresh/apache-hive-3.1.2-bin/lib/log4j-slf4j-impl-2.10.0.jar!/o
rg/slf4j/impl/StaticLoggerBinder.class]
SLF4J: Found binding in [jar:file:/home/haresh/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]
Hive Session ID = cdd526b1-00ef-4b44-947f-d608a8ea7ef7

Logging initialized using configuration in jar:file:/home/haresh/apache-hive-3.1.2-bin/lib/hive-common-
3.1.2.jar!/hive-log4j2.properties Async: true
Hive Session ID = 00b44cc5-60ae-4fbb-97a0-7a845184b5c6
Hive-on-MR is deprecated in Hive 2 and may not be available in the future versions. Consider using a di
fferent execution engine (i.e. spark, tez) or using Hive 1.X releases.
```

Result:

Thus, the Apache Hive installation is completed successfully.