

EXP NO: 5

Installation Of Hive

Environment Setting for Hive :

```
hadoop@fedora:~$ nano .bashrc
GNU nano 7.2 .bashrc
# User specific environment
if ! [[ "$PATH" =~ "$HOME/.local/bin:$HOME/bin:" ]]; then
    PATH="$HOME/.local/bin:$HOME/bin:$PATH"
fi
export PATH

# Uncomment the following line if you don't like systemctl's auto-paging feature:
# export SYSTEMD_PAGER=

# User specific aliases and functions
if [ -d ~/.bashrc.d ]; then
    for rc in ~/.bashrc.d/*; do
        if [ -f "$rc" ]; then
            . "$rc"
        fi
    done
fi

#Hadoop Related Options
export JAVA_HOME=/usr/lib/jvm/java-11-openjdk-11.0.24.0.8-2.fc40.x86_64
export HADOOP_HOME=/home/hadoop/hadoop
export HADOOP_INSTALL=$HADOOP_HOME
export HADOOP_MAPRED_HOME=$HADOOP_HOME
export HADOOP_COMMON_HOME=$HADOOP_HOME
export HADOOP_HDFS_HOME=$HADOOP_HOME
export YARN_HOME=$HADOOP_HOME
export HADOOP_COMMON_LIB_NATIVE_DIR=$HADOOP_HOME/lib/native
export PATH=$PATH:$HADOOP_HOME/sbin:$HADOOP_HOME/bin
export HADOOP_OPTS="-Djava.library.path=$HADOOP_HOME/lib/native"
export PIG_HOME=/home/hadoop/pig
export PATH=$PATH:$PIG_HOME/bin
export PIG_CLASSPATH=$PIG_HOME/conf:$HADOOP_INSTALL/etc/hadoop/
export PIG_CONF_DIR=$PIG_HOME/conf
export PIG_CLASSPATH=$PIG_CONF_DIR:$PATH
export HIVE_HOME=/home/jeciyazhini/hive
export PATH=$PATH:$HIVE_HOME/bin
export HADOOP_USER_CLASSPATH_FIRST=true
unse trc
```

Configure Hive (hive-env.sh, hive-site.xml) :

```
hadoop@fedora:~/hive/conf$ nano hive.env.sh
GNU nano 7.2 hive.env.sh
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# WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
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# limitations under the License.
#
# Set Hive and Hadoop environment variables here. These variables can be used
# to control the execution of Hive. It should be used by admins to configure
# the Hive installation (so that users do not have to set environment variables
# or set command line parameters to get correct behavior).
#
# The hive service being invoked (CLI etc.) is available via the environment
# variable SERVICE
#
# Hive Client memory usage can be an issue if a large number of clients
# are running at the same time. The flags below have been useful in
# reducing memory usage:
#
# if [ "$SERVICE" = "cli" ]; then
#     if [ -z "$DEBUG" ]; then
#         export HADOOP_OPTS="$HADOOP_OPTS -XX:NewRatio=12 -Xms10m -XX:MaxHeapFreeRatio=40 -XX:MinHeapFreeRatio=15 -XX:+UseParNewGC -XX:-UseGCOverheadLimit"
#     else
#         export HADOOP_OPTS="$HADOOP_OPTS -XX:NewRatio=12 -Xms10m -XX:MaxHeapFreeRatio=40 -XX:MinHeapFreeRatio=15 -XX:-UseGCOverheadLimit"
#     fi
# fi
#
# The heap size of the jvm started by hive shell script can be controlled via:
#
# export HADOOP_HEAPSIZE=1024
#
# Larger heap size may be required when running queries over large number of files or partitions.
# By default hive shell scripts use a heap size of 256 (MB). Larger heap size would also be
```

```
hadoop@fedora:~/hive/conf
hive-site.xml

GNU nano 7.2
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<?xml-stylesheet type="text/xsl" href="configuration.xsl"?><!--
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distributed under the License is distributed on an "AS IS" BASIS,
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limitations under the License.
--><configuration>
<!-- WARNING!!! This file is auto generated for documentation purposes ONLY! -->
<!-- WARNING!!! Any changes you make to this file will be ignored by Hive. -->
<!-- WARNING!!! You must make your changes in hive-site.xml instead. -->
<!-- Hive Execution Parameters -->
<property>
  <name>hive.metastore.client.cache.v2.enabled</name>
  <value>true</value>
  <description>This property enables a Caffeine Cache for Metastore client</description>
</property>
<property>
  <name>hive.metastore.client.cache.v2.maxSize</name>
  <value>1Gb</value>
  <description>
    Expects a byte size value with unit (blank for bytes, kb, mb, gb, tb, pb).
    Set the maximum size (number of bytes) of the metastore client cache (DEFAULT: 1Gb). Only in effect when the cache is enabled
  </description>
</property>
<property>
  <name>hive.metastore.client.cache.v2.recordStats</name>
  <value>false</value>
  <description>This property enables recording metastore client cache stats in DEBUG logs</description>
</property>
<property>
  <name>dfs.xattr.supported.only.on.reserved.namespace</name>
  <value>false</value>
  <description>DFS supports xattr only on Reserved Name space (/reserved/raw)</description>
```

Connecting Hive to SQL Database with JDBC :

!connect jdbc:mysql://localhost:3306/<database> <username> <password>

```
Beeline version 4.0.0 by Apache Hive
beeline> show databases;
No current connection
beeline> !connect jdbc:mysql://localhost:3306/hive root admin
Connecting to jdbc:mysql://localhost:3306/hive
Connected to: MySQL (version 8.0.39)
Driver: MySQL Connector/J (version mysql-connector-java-8.0.15 (Revision: 79a4336f140499bd22dd07f02b708e163844e3d5))
Transaction isolation: TRANSACTION_REPEATABLE_READ
0: jdbc:mysql://localhost:3306/hive> show databases;
Error: You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'databases' at line 1 (state
=42000,code=1064)
0: jdbc:mysql://localhost:3306/hive> show databases;
+-----+
| Database |
+-----+
| hive     |
| information_schema |
| metastore |
| mysql    |
| performance_schema |
| sys      |
+-----+
6 rows selected (0.043 seconds)
0: jdbc:mysql://localhost:3306/hive> create database financials;
1 row affected (2.151 seconds)
0: jdbc:mysql://localhost:3306/hive> use financials
. . . . .> ;
No rows affected (0.004 seconds)
0: jdbc:mysql://localhost:3306/hive> CREATE TABLE finance_table( id INT, name STRING );
Error: You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'STRING )' at line 1 (state
=42000,code=1064)
0: jdbc:mysql://localhost:3306/hive> CREATE TABLE finance_table(id integer, name varchar(25));
No rows affected (0.592 seconds)
```

```
0: jdbc:mysql://localhost:3306/hive> CREATE TABLE finance_table(id integer, name varchar(25));
No rows affected (0.592 seconds)
0: jdbc:mysql://localhost:3306/hive> INSERT INTO finance_tableVALUES (1, 'Alice'), (2, 'Bob'), (3, 'Charlie');
Error: You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '1, 'Alice'), (2, 'Bob'), (
3, 'Charlie')' at line 1 (state=42000,code=1064)
0: jdbc:mysql://localhost:3306/hive> INSERT INTO finance_tableVALUES (1, 'Alice');
Error: You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '1, 'Alice')' at line 1 (st
ate=42000,code=1064)
0: jdbc:mysql://localhost:3306/hive> INSERT INTO finance_table VALUES (1, 'Alice'), (2, 'Bob'), (3, 'Charlie');
3 rows affected (0.547 seconds)
0: jdbc:mysql://localhost:3306/hive> CREATE VIEW myview AS SELECT name, id FROM finance_table;
No rows affected (0.272 seconds)
0: jdbc:mysql://localhost:3306/hive> SELECT*FROM myview;
+-----+
| name | id |
+-----+
| Alice | 1 |
| Bob   | 2 |
| Charlie | 3 |
+-----+
3 rows selected (0.012 seconds)
0: jdbc:mysql://localhost:3306/hive> DESCRIBE finance_table;
+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+
| id    | int  | YES  |     | NULL    |       |
| name  | varchar(25) | YES  |     | NULL    |       |
+-----+
2 rows selected (0.021 seconds)
```

Result :

Thus Hive is successfully installed and connected with SQL database.