**Labs for Apache Sqoop**

**1 Connect to the Lab Environment**

(a) Using your SSH client, connect to your virtual box. login as **root**

(b) Enter the following command to confirm that you are:

whoami

**2 Preparing MySQL**

(1) mysql -u root -p

(2) DROP USER 'hip\_sqoop\_user'@'localhost';

(3) CREATE USER 'hip\_sqoop\_user'@'localhost' IDENTIFIED BY 'password';

(4) GRANT ALL PRIVILEGES ON \*.\* TO 'hip\_sqoop\_user'@'localhost' WITH GRANT OPTION;

(5) GRANT FILE ON \*.\* TO 'hip\_sqoop\_user'@'localhost' WITH GRANT OPTION;

(6) FLUSH PRIVILEGES;

(7) DROP DATABASE IF EXISTS sqoop\_test;

(8) CREATE DATABASE sqoop\_test;

(9) USE sqoop\_test;

(10) CREATE TABLE stocks (

id INT NOT NULL AUTO\_INCREMENT PRIMARY KEY,

symbol VARCHAR(100),

quote\_date VARCHAR(100),

open\_price DOUBLE PRECISION,

high\_price DOUBLE PRECISION,

low\_price DOUBLE PRECISION,

close\_price DOUBLE PRECISION,

volume INTEGER,

adj\_close\_price DOUBLE PRECISION

);

(11) CREATE TABLE stocks\_export (

id INT NOT NULL AUTO\_INCREMENT PRIMARY KEY,

symbol VARCHAR(100),

quote\_date VARCHAR(100),

open\_price DOUBLE PRECISION,

high\_price DOUBLE PRECISION,

low\_price DOUBLE PRECISION,

close\_price DOUBLE PRECISION,

volume INTEGER,

adj\_close\_price DOUBLE PRECISION

);

(12) CREATE TABLE stocks\_staging (

id INT NOT NULL AUTO\_INCREMENT PRIMARY KEY,

symbol VARCHAR(100),

quote\_date VARCHAR(100),

open\_price DOUBLE PRECISION,

high\_price DOUBLE PRECISION,

low\_price DOUBLE PRECISION,

close\_price DOUBLE PRECISION,

volume INTEGER,

adj\_close\_price DOUBLE PRECISION

);

(13) LOAD DATA LOCAL INFILE '/root/TrainingOnHDP/dataset/stocks.txt'

INTO TABLE stocks

FIELDS TERMINATED BY ','

LINES TERMINATED BY '\n'

(symbol, @quote\_date, open\_price, high\_price, low\_price, close\_price, volume, adj\_close\_price)

SET quote\_date = DATE\_FORMAT(@quote\_date, '%Y-%m-%d');

(14) quit;

**3 Working in MySQL**

(a) Enter the following command to login to the sqoop\_test database:

mysql -u hip\_sqoop\_user -p sqoop\_test

(b) After type in "password", mysql>shell command prompt at the end

(c) Enter the following command:

SELECT \* FROM stocks;

(d) Enter the following command to exit the MySQL command shell:

quit

**4 Getting to Know Sqoop**

(a) Enter the following command:

$sqoop help

(b) Enter the following command:

sqoop list-tables -connect jdbc:mysql://localhost:3306/sqoop\_test --username hip\_sqoop\_user -P;

(c) After type in "password", you should be able to see all tables

**5 Data Import with Sqoop**

(a) Enter the following command in one line:

sqoop import --connect jdbc:mysql://localhost/sqoop\_test --table stocks --username hip\_sqoop\_user -P;

(b) You should see a couple of errors

(c) Enter the following command in one line:

sqoop import --connect jdbc:mysql://localhost/sqoop\_test --table stocks --fetch-size 10 --username hip\_sqoop\_user -P

(d) Enter the following command:

ls

You should see the following output:

stocks.java

(e) Enter the following command:

hadoop fs -ls -R

(f) Enter the following command:

hadoop fs -cat stocks/part-m-00000

(g) Enter the following command:

hadoop fs -cat stocks/part-m-00003

(h) Enter the following command:

hadoop fs -cat stocks/\*

**6 Using Imported Data in HIVE**

(a) Launch the Hive shell:

hive

You should get the hive> command prompt.

(b) Enter the following command line by line submitting each line with Enter:

CREATE TABLE hiveSTOCKS (id INT, symbol STRING, quote\_date STRING, open\_price DOUBLE, high\_price DOUBLE, low\_price DOUBLE, close\_price DOUBLE, volume INT, adj\_close\_price DOUBLE)

ROW FORMAT DELIMITED FIELDS TERMINATED BY ','

STORED AS TEXTFILE

LOCATION '/user/root/stocks';

(c) Confirm creation of the table with following command:

SHOW TABLES;

(d) Enter the following command:

SELECT \* FROM hiveSTOCKS;

(e) Enter the following command:

SELECT \* FROM hiveSTOCKS WHERE quote\_date < '2003-01-02';

(f) Enter the following command:

DROP TABLE hiveSTOCKS;

(g) Enter the following command:

dfs -rm -r -skipTrash /user/root/\*;

(h) Enter the following command to exit Hive:

quit;