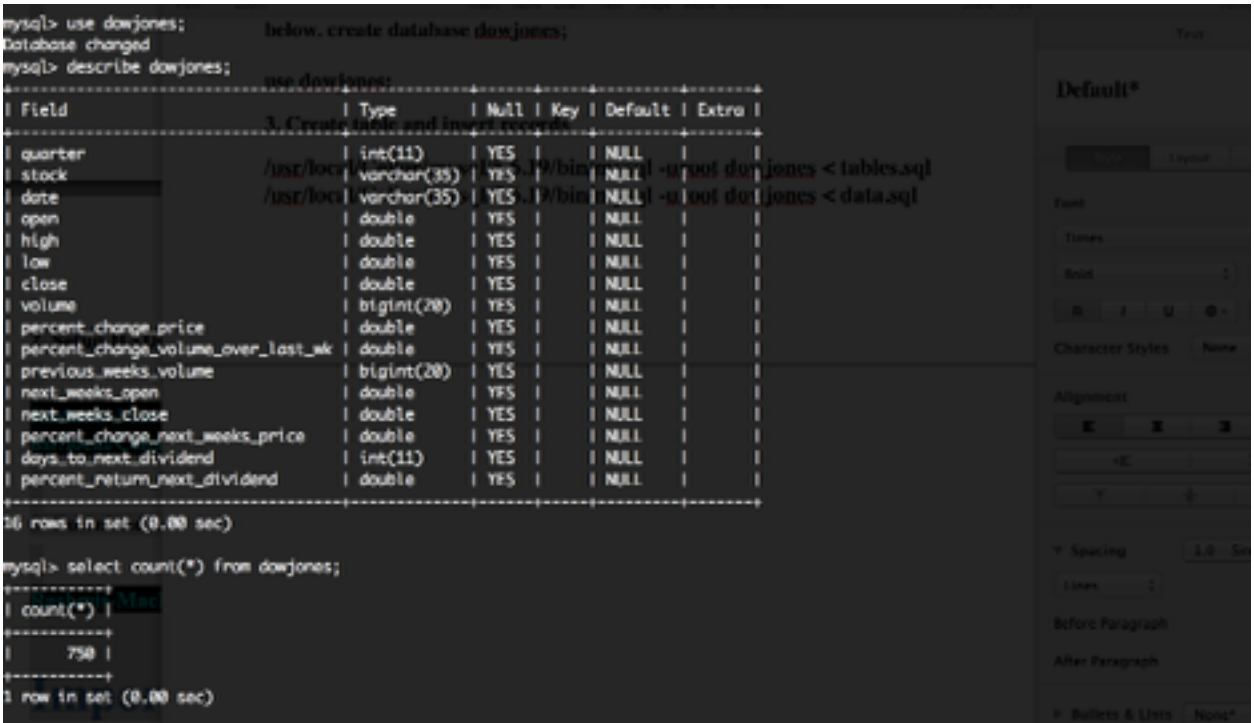
Installing MySQL on Mac

1. Download MySQL from Homebrew and Install mysql.

2. Star MySQL server.



Creating Database, Table and loading the data

1. Open Mysql command line client, give username as "root" & password. MySQL command line will open. Now we can create tables, databases etc.

2. Create a new database and use new database using command given below. create database dowjones;

use dowjones;

3. Create table and insert records

/usr/local/Cellar/mysql/5.6.19/bin/mysql -uroot dowjones < tables.sql
/usr/local/Cellar/mysql/5.6.19/bin/mysql -uroot dowjones < data.sql

Installing Sqoop on Mac

1. Download & untar sqoop-1.4.5.bin_hadoop-0.23.tar.gz

```
Rashmis-MacBook-Pro:Downloads rashmi$ tar -zxvf
sqoop-1.4.5.bin__hadoop-0.23.tar.gz
```

2. Setup HADOO_HOME

export HADOOP_HOME=/usr/local/Cellar/hadoop/2.6.0

3. Download MySQL connector.

```
Rashmis-MacBook-Pro:lib rashmi$ cp ~/Downloads/mysql-connector-java-5.1.17-bin.jar .
```

Importing data from MySQL to HDFS using Sqoop

1. Execute Scoop command to get data from MySQL into HDFS.

```
Rashmis-MacBook-Pro:bin rashmi$ ./sqoop import --connect jdbc:mysql://localhost/dowjones --table dowjones --target-dir /user/rashmi/dowjones --username root --split-by quarter
Warning: /Users/rashmi/sqoop-1.4.5.bin__hadoop-2.0.4-alpha/bin/../../accumulo does not exist! Accumulo imports will fail.
Please set $ACCUMULO_HOME to the root of your Accumulo installation.
Warning: /Users/rashmi/sqoop-1.4.5.bin__hadoop-2.0.4-alpha/bin/../../zookeeper does not exist! Accumulo imports will fail.
Please set $ZOOKEEPER_HOME to the root of your Zookeeper installation.
14/12/11 10:57:08 INFO sqoop.Sqoop: Running Sqoop version: 1.4.5
14/12/11 10:57:09 INFO manager.MySQLManager: Preparing to use a MySQL streaming resultset.
14/12/11 10:57:09 INFO tool.CodeGenTool: Beginning code generation
14/12/11 10:57:09 INFO manager.SqlManager: Executing SQL statement: SELECT t.* FROM `dowjones` AS t LIMIT 1
14/12/11 10:57:09 INFO manager.SqlManager: Executing SQL statement: SELECT t.* FROM `dowjones` AS t LIMIT 1
14/12/11 10:57:09 INFO orm.CompilationManager: HADOOP_MAPRED_HOME is /usr/local/Cellar/hadoop/2.6.0/libexec
Note: /tmp/sqoop-rashmi/compile/8e6a8907497edd16309a0c4840a697fa/dowjones.java uses or overrides a deprecated API.
Note: Recompile with -Xlint:deprecation for details.
```

```
14/12/11 10:57:11 INFO orm.CompilationManager: Writing jar file:
/tmp/sqoop-rashmi/compile/8e6a8907497edd16309a0c4840a697fa/
dowjones.jar
14/12/11 10:57:11 WARN manager.MySQLManager: It looks like you
are importing from mysql.
14/12/11 10:57:11 WARN manager.MySQLManager: This transfer can
be faster! Use the --direct
14/12/11 10:57:11 WARN manager.MySQLManager: option to exercise
a MySQL-specific fast path.
14/12/11 10:57:11 INFO manager.MySQLManager: Setting zero
DATETIME behavior to convertToNull (mysql)
14/12/11 10:57:11 INFO mapreduce.ImportJobBase: Beginning import
of dowjones
SLF4J: Class path contains multiple SLF4J bindings.
SLF4J: Found binding in [jar:file:/usr/local/Cellar/hadoop/
2.6.0/libexec/share/hadoop/common/lib/slf4j-log4j12-1.7.5.jar!/
org/slf4j/impl/StaticLoggerBinder.class]
SLF4J: Found binding in [jar:file:/usr/local/Cellar/hbase/
0.98.8/libexec/lib/slf4j-log4j12-1.6.4.jar!/org/slf4j/impl/
StaticLoggerBinder.class]
SLF4J: Found binding in [jar:file:/usr/local/Cellar/hive/0.14.0/
libexec/lib/hive-jdbc-0.14.0-standalone.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.slf4j.impl.Log4jLoggerFactory]
14/12/11 10:57:11 WARN util.NativeCodeLoader: Unable to load
native-hadoop library for your platform... using builtin-java
classes where applicable
14/12/11 10:57:11 INFO Configuration.deprecation: mapred.jar is
deprecated. Instead, use mapreduce.job.jar
14/12/11 10:57:12 INFO Configuration.deprecation:
mapred.map.tasks is deprecated. Instead, use mapreduce.job.maps
14/12/11 10:57:12 INFO client.RMProxy: Connecting to
ResourceManager at /0.0.0.0:8032
14/12/11 10:57:13 INFO db.DBInputFormat: Using read commited
transaction isolation
```

```
14/12/11 10:57:13 INFO db.DataDrivenDBInputFormat:
BoundingValsQuery: SELECT MIN(`quarter`), MAX(`quarter`) FROM
`dowjones`
14/12/11 10:57:13 INFO mapreduce.JobSubmitter: number of splits:
2
14/12/11 10:57:13 INFO mapreduce.JobSubmitter: Submitting tokens
for job: job_1418322400940_0003
14/12/11 10:57:13 INFO impl.YarnClientImpl: Submitted
application application_1418322400940_0003
14/12/11 10:57:13 INFO mapreduce.Job: The url to track the job:
http://Rashmis-MacBook-Pro.local:8088/proxy/
application_1418322400940_0003/
14/12/11 10:57:13 INFO mapreduce.Job: Running job:
job_1418322400940_0003
14/12/11 10:57:21 INFO mapreduce.Job: Job job_1418322400940_0003
running in uber mode : false
14/12/11 10:57:21 INFO mapreduce.Job:  map 0% reduce 0%
14/12/11 10:57:27 INFO mapreduce.Job:  map 50% reduce 0%
14/12/11 10:57:28 INFO mapreduce.Job:  map 100% reduce 0%
14/12/11 10:57:28 INFO mapreduce.Job: Job job_1418322400940_0003
completed successfully
14/12/11 10:57:28 INFO mapreduce.Job: Counters: 30
    File System Counters
        FILE: Number of bytes read=0
        FILE: Number of bytes written=229938
        FILE: Number of read operations=0
        FILE: Number of large read operations=0
        FILE: Number of write operations=0
        HDFS: Number of bytes read=217
        HDFS: Number of bytes written=74390
        HDFS: Number of read operations=8
        HDFS: Number of large read operations=0
        HDFS: Number of write operations=4
    Job Counters
        Launched map tasks=2
        Other local map tasks=2
        Total time spent by all maps in occupied slots (ms)=8704
        Total time spent by all reduces in occupied slots (ms)=0
        Total time spent by all map tasks (ms)=8704
        Total vcore-seconds taken by all map tasks=8704
```

```
        Total megabyte-seconds taken by all map tasks=8912896
    Map-Reduce Framework
        Map input records=750
        Map output records=750
        Input split bytes=217
        Spilled Records=0
        Failed Shuffles=0
        Merged Map outputs=0
        GC time elapsed (ms)=97
        CPU time spent (ms)=0
        Physical memory (bytes) snapshot=0
        Virtual memory (bytes) snapshot=0
        Total committed heap usage (bytes)=304087040
    File Input Format Counters
        Bytes Read=0
    File Output Format Counters
        Bytes Written=74390
14/12/11 10:57:28 INFO mapreduce.ImportJobBase: Transferred
72.6465 KB in 15.817 seconds (4.5929 KB/sec)
14/12/11 10:57:28 INFO mapreduce.ImportJobBase: Retrieved 750
records.
```

2. Verify data in HDFS.

```
Rashmis-MacBook-Pro:bin rashmi$ hadoop fs -ls /user/rashmi/
dowjones
14/12/11 11:13:19 WARN util.NativeCodeLoader: Unable to load
native-hadoop library for your platform... using builtin-java
classes where applicable
Found 3 items
-rw-r--r--   3 rashmi supergroup          0 2014-12-11 10:57 /
user/rashmi/dowjones/_SUCCESS
-rw-r--r--   3 rashmi supergroup      35501 2014-12-11 10:57 /
user/rashmi/dowjones/part-m-00000
-rw-r--r--   3 rashmi supergroup      38889 2014-12-11 10:57 /
user/rashmi/dowjones/part-m-00001
```

Create Hive Tables on the dataset

```
hive> create database dowjones;
OK
Time taken: 0.069 seconds
hive> use dowjones;
OK
Time taken: 0.023 seconds
hive> CREATE EXTERNAL TABLE DOWJONES(quarter INT, stock
STRING, dj_date DATE, open DOUBLE, high DOUBLE, low
DOUBLE, close DOUBLE, volume BIGINT,
percent_change_price DOUBLE,
percent_change_volume_over_last_wk DOUBLE,
previous_weeks_volume DOUBLE, next_weeks_open DOUBLE,
next_weeks_close DOUBLE,
percent_change_next_weeks_price DOUBLE,
days_to_next_dividend DOUBLE,
percent_return_next_dividend DOUBLE) ROW FORMAT
DELIMITED FIELDS TERMINATED BY ',' LINES TERMINATED BY
'\n' STORED AS TEXTFILE LOCATION '/user/rashmi/
dowjones';
OK
Time taken: 0.254 seconds
hive> show tables;
OK
dowjones
Time taken: 0.023 seconds, Fetched: 1 row(s)
hive> desc dowjones;
OK
quarter                 int
stock                   string
```

```
dj_date                 date
open                    double
high                    double
low                     double
close                   double
volume                  bigint
percent_change_price    double
percent_change_volume_over_last_wk   double
                        
previous_weeks_volume   double
next_weeks_open         double
next_weeks_close        double
percent_change_next_weeks_price   double
days_to_next_dividend   double
percent_return_next_dividend   double
Time taken: 0.242 seconds, Fetched: 16 row(s)
```

```
hive> select count(*) from dowjones;
Query ID = rashmi_20141211113232_0aa2e35f-67cc-4ab7-
b432-1dd7bb65375d
Total jobs = 1
Launching Job 1 out of 1
Number of reduce tasks determined at compile time: 1
In order to change the average load for a reducer (in bytes):
  set hive.exec.reducers.bytes.per.reducer=<number>
In order to limit the maximum number of reducers:
  set hive.exec.reducers.max=<number>
In order to set a constant number of reducers:
  set mapreduce.job.reduces=<number>
Starting Job = job_1418322400940_0004, Tracking URL = http://
Rashmis-MacBook-Pro.local:8088/proxy/
application_1418322400940_0004/
Kill Command = /usr/local/Cellar/hadoop/2.6.0/libexec/bin/hadoop
job  -kill job_1418322400940_0004
Hadoop job information for Stage-1: number of mappers: 1; number
of reducers: 1
```

```
2014-12-11 11:32:29,783 Stage-1 map = 0%,  reduce = 0%
2014-12-11 11:32:37,245 Stage-1 map = 100%,  reduce = 0%
2014-12-11 11:32:44,578 Stage-1 map = 100%,  reduce = 100%
Ended Job = job_1418322400940_0004
MapReduce Jobs Launched:
Stage-Stage-1: Map: 1  Reduce: 1   HDFS Read: 74671 HDFS Write:
4 SUCCESS
Total MapReduce CPU Time Spent: 0 msec
OK
750
Time taken: 23.958 seconds, Fetched: 1 row(s)
```

```
hive> show create table dowjones;
OK
CREATE EXTERNAL TABLE `dowjones`(
  `quarter` int,
  `stock` string,
  `dj_date` date,
  `open` double,
  `high` double,
  `low` double,
  `close` double,
  `volume` bigint,
  `percent_change_price` double,
  `percent_change_volume_over_last_wk` double,
  `previous_weeks_volume` double,
  `next_weeks_open` double,
  `next_weeks_close` double,
  `percent_change_next_weeks_price` double,
  `days_to_next_dividend` double,
  `percent_return_next_dividend` double)
ROW FORMAT DELIMITED
  FIELDS TERMINATED BY ','
  LINES TERMINATED BY '\n'
STORED AS INPUTFORMAT
  'org.apache.hadoop.mapred.TextInputFormat'
OUTPUTFORMAT
  'org.apache.hadoop.hive.ql.io.HiveIgnoreKeyTextOutputFormat'
LOCATION
  'hdfs://localhost:8020/user/rashmi/dowjones'
```

```
TBLPROPERTIES (
  'COLUMN_STATS_ACCURATE'='false',
  'numFiles'='0',
  'numRows'='-1',
  'rawDataSize'='-1',
  'totalSize'='0',
  'transient_lastDdlTime'='1418326292')
Time taken: 0.06 seconds, Fetched: 33 row(s)
hive>
```

Executing Hive Query on Hive Table and store it in a CSV file in local FS

```
hive> select quarter, stock, SUM(volume) from dowjones GROUP BY
quarter, stock;
Query ID = rashmi_20141211113434_2b9e3c2c-dae8-4d13-
b4d9-19afc55a3117
Total jobs = 1
Launching Job 1 out of 1
Number of reduce tasks not specified. Estimated from input data
size: 1
In order to change the average load for a reducer (in bytes):
  set hive.exec.reducers.bytes.per.reducer=<number>
In order to limit the maximum number of reducers:
  set hive.exec.reducers.max=<number>
In order to set a constant number of reducers:
  set mapreduce.job.reduces=<number>
Starting Job = job_1418322400940_0005, Tracking URL = http://
Rashmis-MacBook-Pro.local:8088/proxy/
application_1418322400940_0005/
Kill Command = /usr/local/Cellar/hadoop/2.6.0/libexec/bin/hadoop
job  -kill job_1418322400940_0005
```

```
Hadoop job information for Stage-1: number of mappers: 1; number
of reducers: 1
2014-12-11 11:34:39,725 Stage-1 map = 0%,  reduce = 0%
2014-12-11 11:34:44,886 Stage-1 map = 100%,  reduce = 0%
2014-12-11 11:34:51,097 Stage-1 map = 100%,  reduce = 100%
Ended Job = job_1418322400940_0005
MapReduce Jobs Launched:
Stage-Stage-1: Map: 1  Reduce: 1   HDFS Read: 74671 HDFS Write:
972 SUCCESS
Total MapReduce CPU Time Spent: 0 msec
OK
1   AA  1704261619
1   AXP 461889815
1   BA  313697320
1   BAC 9940715801
1   CAT 371202194
1   CSCO    4171820400
1   CVX 495094629
1   DD  386663198
1   DIS 611594126
1   GE  3621713718
1   HD  562518684
1   HPQ 1146273791
1   IBM 314268493
1   INTC    3334810382
1   JNJ 650188923
1   JPM 1912200143
1   KO  508266584
1   KRFT    546769446
1   MCD 483220221
1   MMM 200727362
1   MRK 1082802612
1   MSFT    3460354791
1   PFE 3038874366
1   PG  623756758
1   T   1641869195
1   TRV 232272443
1   UTX 214791992
1   VZ  1132912594
1   WMT 751162352
```

```
1   XOM 1224397732
2   AA  1536708636
2   AXP 418322225
2   BA  280838193
2   BAC 8134262588
2   CAT 472075703
2   CSCO    4794719293
2   CVX 469401115
2   DD  341253270
2   DIS 574497710
2   GE  2976738241
2   HD  642607517
2   HPQ 1225186964
2   IBM 304211118
2   INTC    4140750033
2   JNJ 749963705
2   JPM 1865525270
2   KO  455637642
2   KRFT    573634835
2   MCD 320572286
2   MMM 192263978
2   MRK 836543269
2   MSFT    3782115015
2   PFE 2647799649
2   PG  592570503
2   T   1665313637
2   TRV 196657149
2   UTX 243159733
2   VZ  826717023
2   WMT 641873489
2   XOM 1117839582
Time taken: 18.429 seconds, Fetched: 60 row(s)
```

1. Hive query output into local file.

```
hive> INSERT OVERWRITE LOCAL DIRECTORY '/Users/rashmi/
output' ROW FORMAT DELIMITED FIELDS TERMINATED BY ','
```

```
select quarter, stock, SUM(volume) from dowjones GROUP
BY quarter, stock;
Query ID = rashmi_20141211123333_8e0ff2c7-
f0e0-4f25-9aca-9c5d9decd2d8
Total jobs = 1
Launching Job 1 out of 1
Number of reduce tasks not specified. Estimated from
input data size: 1
In order to change the average load for a reducer (in
bytes):
  set hive.exec.reducers.bytes.per.reducer=<number>
In order to limit the maximum number of reducers:
  set hive.exec.reducers.max=<number>
In order to set a constant number of reducers:
  set mapreduce.job.reduces=<number>
Starting Job = job_1418322400940_0011, Tracking URL =
http://Rashmis-MacBook-Pro.local:8088/proxy/
application_1418322400940_0011/
Kill Command = /usr/local/Cellar/hadoop/2.6.0/libexec/
bin/hadoop job  -kill job_1418322400940_0011
Hadoop job information for Stage-1: number of mappers:
1; number of reducers: 1
2014-12-11 12:33:16,629 Stage-1 map = 0%,  reduce = 0%
2014-12-11 12:33:22,844 Stage-1 map = 100%,  reduce =
0%
2014-12-11 12:33:30,089 Stage-1 map = 100%,  reduce =
100%
Ended Job = job_1418322400940_0011
Copying data to local directory /Users/rashmi/output
Copying data to local directory /Users/rashmi/output
MapReduce Jobs Launched:
Stage-Stage-1: Map: 1  Reduce: 1   HDFS Read: 74671
HDFS Write: 972 SUCCESS
Total MapReduce CPU Time Spent: 0 msec
```

```
OK
Time taken: 22.482 seconds
hive>
```

Exporting Hive query output to MySQL using Sqoop

1.Create table quarter_stock_volumes in dowjones MySQL database.

2. Grant privileges on dowjones MySQL database.

3. Copy the Hive query output File from local file system to HDFS.

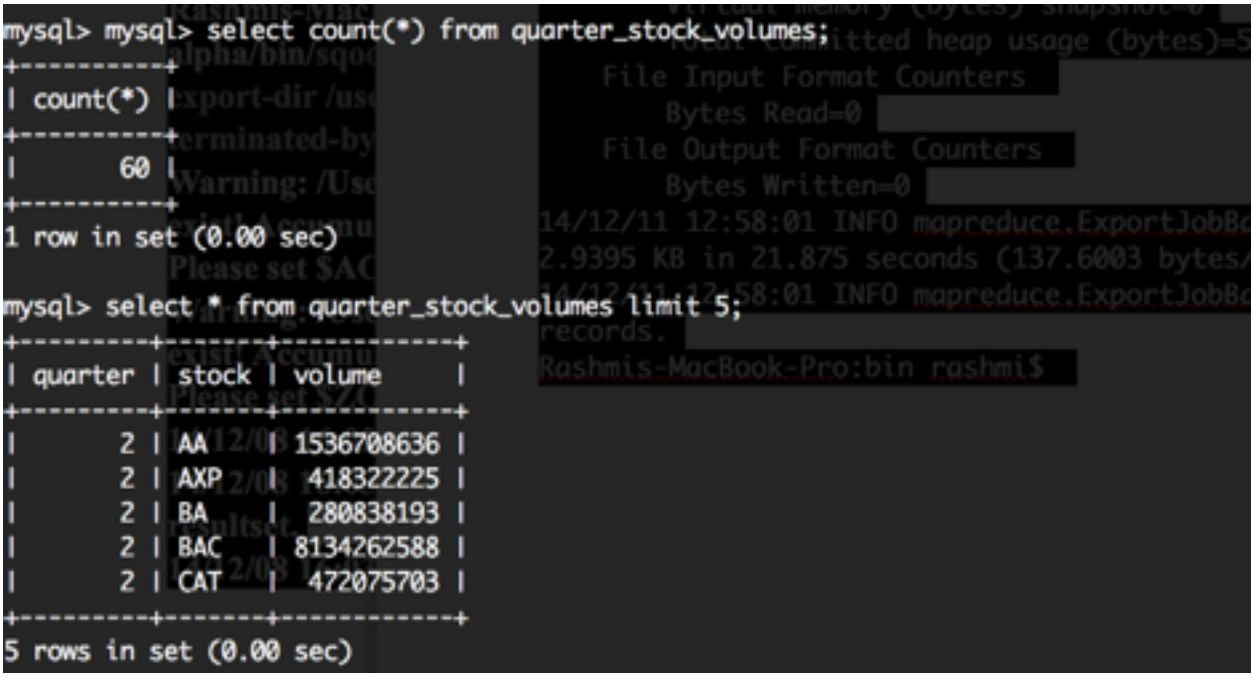
```
Rashmis-MacBook-Pro:output rashmi$ hadoop fs -put /
Users/rashmi/000000_0 /user/rashmi/dowjones/output/
localFS.txt
14/12/11 12:56:54 WARN util.NativeCodeLoader: Unable to
load native-hadoop library for your platform... using
builtin-java classes where applicable
```

4.Execute sqoop export with all the required parameters to export Hive query output into quarter_stock_volumes table in MySQL

```
Rashmis-MacBook-Pro:bin rashmi$ ./sqoop export --connect
jdbc:mysql://localhost/dowjones --table quarter_stock_volumes --
export-dir /user/rashmi/dowjones/output/localFS.txt --username
root --input-fields-terminated-by ',' --input-lines-terminated-
by '\n'
Warning: /Users/rashmi/sqoop-1.4.5.bin__hadoop-2.0.4-alpha/
bin/../../accumulo does not exist! Accumulo imports will fail.
Please set $ACCUMULO_HOME to the root of your Accumulo
installation.
Warning: /Users/rashmi/sqoop-1.4.5.bin__hadoop-2.0.4-alpha/
bin/../../zookeeper does not exist! Accumulo imports will fail.
Please set $ZOOKEEPER_HOME to the root of your Zookeeper
installation.
14/12/11 12:57:36 INFO sqoop.Sqoop: Running Sqoop version: 1.4.5
14/12/11 12:57:36 INFO manager.MySQLManager: Preparing to use a
MySQL streaming resultset.
14/12/11 12:57:36 INFO tool.CodeGenTool: Beginning code
generation
14/12/11 12:57:36 INFO manager.SqlManager: Executing SQL
statement: SELECT t.* FROM `quarter_stock_volumes` AS t LIMIT 1
14/12/11 12:57:36 INFO manager.SqlManager: Executing SQL
statement: SELECT t.* FROM `quarter_stock_volumes` AS t LIMIT 1
14/12/11 12:57:36 INFO orm.CompilationManager:
HADOOP_MAPRED_HOME is /usr/local/Cellar/hadoop/2.6.0/libexec
Note: /tmp/sqoop-rashmi/compile/
75816172dc231dfbdd76fe9bb85ca722/quarter_stock_volumes.java uses
or overrides a deprecated API.
Note: Recompile with -Xlint:deprecation for details.
14/12/11 12:57:38 INFO orm.CompilationManager: Writing jar file:
/tmp/sqoop-rashmi/compile/75816172dc231dfbdd76fe9bb85ca722/
quarter_stock_volumes.jar
14/12/11 12:57:38 INFO mapreduce.ExportJobBase: Beginning export
of quarter_stock_volumes
SLF4J: Class path contains multiple SLF4J bindings.
SLF4J: Found binding in [jar:file:/usr/local/Cellar/hadoop/
2.6.0/libexec/share/hadoop/common/lib/slf4j-log4j12-1.7.5.jar!/
org/slf4j/impl/StaticLoggerBinder.class]
SLF4J: Found binding in [jar:file:/usr/local/Cellar/hbase/
0.98.8/libexec/lib/slf4j-log4j12-1.6.4.jar!/org/slf4j/impl/
StaticLoggerBinder.class]
```

```
SLF4J: Found binding in [jar:file:/usr/local/Cellar/hive/0.14.0/
libexec/lib/hive-jdbc-0.14.0-standalone.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.slf4j.impl.Log4jLoggerFactory]
14/12/11 12:57:38 WARN util.NativeCodeLoader: Unable to load
native-hadoop library for your platform... using builtin-java
classes where applicable
14/12/11 12:57:38 INFO Configuration.deprecation: mapred.jar is
deprecated. Instead, use mapreduce.job.jar
14/12/11 12:57:39 INFO Configuration.deprecation:
mapred.reduce.tasks.speculative.execution is deprecated.
Instead, use mapreduce.reduce.speculative
14/12/11 12:57:39 INFO Configuration.deprecation:
mapred.map.tasks.speculative.execution is deprecated. Instead,
use mapreduce.map.speculative
14/12/11 12:57:39 INFO Configuration.deprecation:
mapred.map.tasks is deprecated. Instead, use mapreduce.job.maps
14/12/11 12:57:39 INFO client.RMProxy: Connecting to
ResourceManager at /0.0.0.0:8032
14/12/11 12:57:40 INFO input.FileInputFormat: Total input paths
to process : 1
14/12/11 12:57:40 INFO input.FileInputFormat: Total input paths
to process : 1
14/12/11 12:57:40 INFO mapreduce.JobSubmitter: number of splits:
4
14/12/11 12:57:40 INFO Configuration.deprecation:
mapred.map.tasks.speculative.execution is deprecated. Instead,
use mapreduce.map.speculative
14/12/11 12:57:40 INFO mapreduce.JobSubmitter: Submitting tokens
for job: job_1418322400940_0015
14/12/11 12:57:40 INFO impl.YarnClientImpl: Submitted
application application_1418322400940_0015
14/12/11 12:57:41 INFO mapreduce.Job: The url to track the job:
http://Rashmis-MacBook-Pro.local:8088/proxy/
application_1418322400940_0015/
14/12/11 12:57:41 INFO mapreduce.Job: Running job:
job_1418322400940_0015
```

```
14/12/11 12:57:49 INFO mapreduce.Job: Job job_1418322400940_0015
running in uber mode : false
14/12/11 12:57:49 INFO mapreduce.Job:  map 0% reduce 0%
14/12/11 12:58:00 INFO mapreduce.Job:  map 25% reduce 0%
14/12/11 12:58:01 INFO mapreduce.Job:  map 100% reduce 0%
14/12/11 12:58:01 INFO mapreduce.Job: Job job_1418322400940_0015
completed successfully
14/12/11 12:58:01 INFO mapreduce.Job: Counters: 30
    File System Counters
        FILE: Number of bytes read=0
        FILE: Number of bytes written=457848
        FILE: Number of read operations=0
        FILE: Number of large read operations=0
        FILE: Number of write operations=0
        HDFS: Number of bytes read=3010
        HDFS: Number of bytes written=0
        HDFS: Number of read operations=16
        HDFS: Number of large read operations=0
        HDFS: Number of write operations=0
    Job Counters
        Launched map tasks=4
        Data-local map tasks=4
        Total time spent by all maps in occupied slots (ms)=39104
        Total time spent by all reduces in occupied slots (ms)=0
        Total time spent by all map tasks (ms)=39104
        Total vcore-seconds taken by all map tasks=39104
        Total megabyte-seconds taken by all map tasks=40042496
    Map-Reduce Framework
        Map input records=60
        Map output records=60
        Input split bytes=568
        Spilled Records=0
        Failed Shuffles=0
        Merged Map outputs=0
        GC time elapsed (ms)=267
        CPU time spent (ms)=0
        Physical memory (bytes) snapshot=0
        Virtual memory (bytes) snapshot=0
        Total committed heap usage (bytes)=577241088
    File Input Format Counters
```



```
mysql> mysql> select count(*) from quarter_stock_volumes;
+----------+
| count(*) |
+----------+
|       60 |
+----------+
1 row in set (0.00 sec)

mysql> select * from quarter_stock_volumes limit 5;
+---------+-------+------------+
| quarter | stock | volume     |
+---------+-------+------------+
|       2 | AA    | 1536708636 |
|       2 | AXP   |  418322225 |
|       2 | BA    |  280838193 |
|       2 | BAC   | 8134262588 |
|       2 | CAT   |  472075703 |
+---------+-------+------------+
5 rows in set (0.00 sec)
```

```
        Bytes Read=0
    File Output Format Counters
        Bytes Written=0
14/12/11 12:58:01 INFO mapreduce.ExportJobBase: Transferred
2.9395 KB in 21.875 seconds (137.6003 bytes/sec)
14/12/11 12:58:01 INFO mapreduce.ExportJobBase: Exported 60
records.
Rashmis-MacBook-Pro:bin rashmi$
```