

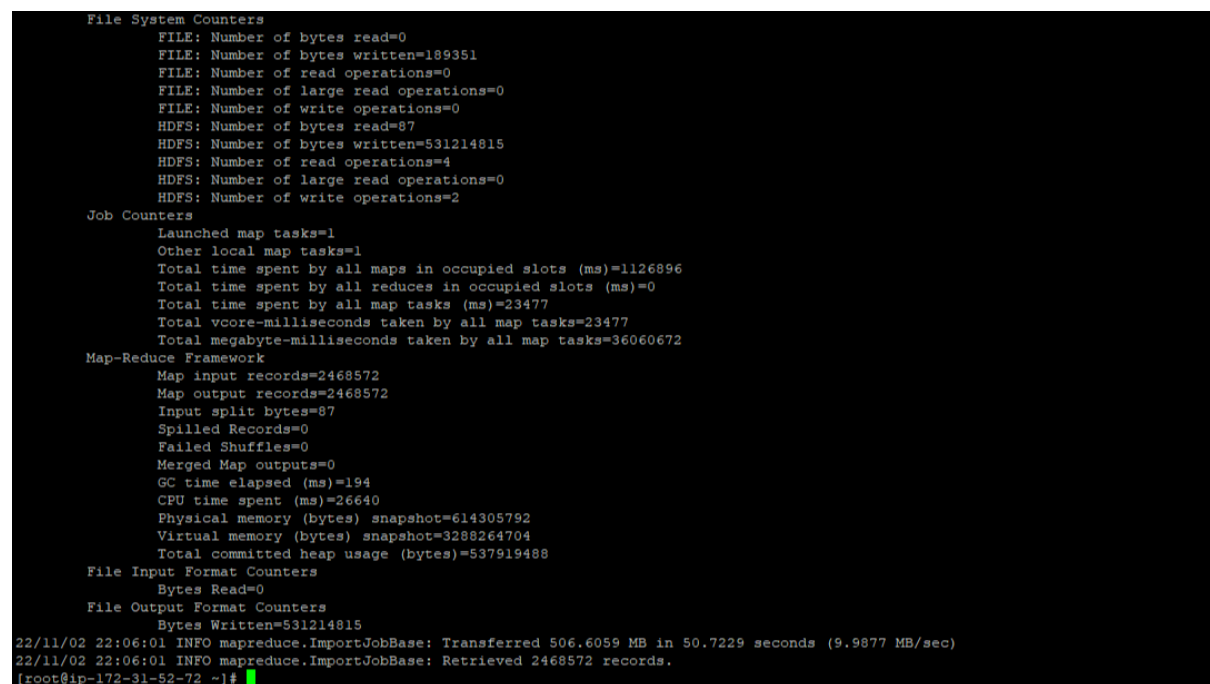
Data Ingestion from RDS to HDFS using SQOOP

After setting up SQOOP with EC2 and EMR Instance >
Importing SQOOP command for importing RDS to HDFS

SQOOP command:-

```
sqoop import \  
--connect jdbc:mysql://upgraddetest.cyaie1c9bmnf.us-east-1.rds.amazonaws.co  
m/testdatabase \  
--table SRC_ATM_TRANS \  
--Username student -password STUDENT123 \  
--target-dir /user/root/SRC_ATM_TRANS \  
-m 1
```

The following screenshot is the result of above command:-



```
File System Counters
  FILE: Number of bytes read=0
  FILE: Number of bytes written=189351
  FILE: Number of read operations=0
  FILE: Number of large read operations=0
  FILE: Number of write operations=0
  HDFS: Number of bytes read=87
  HDFS: Number of bytes written=531214815
  HDFS: Number of read operations=4
  HDFS: Number of large read operations=0
  HDFS: Number of write operations=2
Job Counters
  Launched map tasks=1
  Other local map tasks=1
  Total time spent by all maps in occupied slots (ms)=1126896
  Total time spent by all reduces in occupied slots (ms)=0
  Total time spent by all map tasks (ms)=23477
  Total vcore-milliseconds taken by all map tasks=23477
  Total megabyte-milliseconds taken by all map tasks=36060672
Map-Reduce Framework
  Map input records=2468572
  Map output records=2468572
  Input split bytes=87
  Spilled Records=0
  Failed Shuffles=0
  Merged Map outputs=0
  GC time elapsed (ms)=194
  CPU time spent (ms)=26640
  Physical memory (bytes) snapshot=614305792
  Virtual memory (bytes) snapshot=3288264704
  Total committed heap usage (bytes)=537919488
File Input Format Counters
  Bytes Read=0
File Output Format Counters
  Bytes Written=531214815
22/11/02 22:06:01 INFO mapreduce.ImportJobBase: Transferred 506.6059 MB in 50.7229 seconds (9.9877 MB/sec)
22/11/02 22:06:01 INFO mapreduce.ImportJobBase: Retrieved 2468572 records.
[root@ip-172-31-52-72 ~]#
```

There were total 2468572 rows which were retrieved.

Command used to see the list of imported data in HDFS:

```
hadoop fs -cat /user/root/SRC_ATM_TRANS/part-m-00000
```

Screenshot of the import data:

```

22/11/02 22:06:01 INFO mapreduce.Job: Counters: 30
  File System Counters
    FILE: Number of bytes read=0
    FILE: Number of bytes written=189351
    FILE: Number of read operations=0
    FILE: Number of large read operations=0
    FILE: Number of write operations=0
    HDFS: Number of bytes read=87
    HDFS: Number of bytes written=531214815
    HDFS: Number of read operations=4
    HDFS: Number of large read operations=0
    HDFS: Number of write operations=2
  Job Counters
    Launched map tasks=1
    Other local map tasks=1
    Total time spent by all maps in occupied slots (ms)=1126596
    Total time spent by all reducers in occupied slots (ms)=0
    Total time spent by all map tasks (ms)=22477
    Total vcore-milliseconds taken by all map tasks=23477
    Total megabyte-milliseconds taken by all map tasks=36060672
  Map-Reduce Framework
    Map input records=2468572
    Map output records=2468572
    Input split bytes=87
    Spilled Records=0
    Failed Shuffles=0
    Merged Map outputs=0
    GC time elapsed (ms)=194
    CPU time spent (ms)=26640
    Physical memory (bytes) snapshot=614305792
    Virtual memory (bytes) snapshot=3288264704
    Total committed heap usage (bytes)=537919488
  File Input Format Counters
    Bytes Read=0
  File Output Format Counters
    Bytes Written=531214815
22/11/02 22:06:01 INFO mapreduce.ImportJobBase: Transferred 506.6059 MB in 50.7229 seconds (9.9877 MB/sec)
22/11/02 22:06:01 INFO mapreduce.ImportJobBase: Retrieved 2468572 records.
[root@ip-172-31-52-72 ~]# hadoop fs -ls /user/root/SRC_ATM_TRANS
Found 2 items
-rw-r--r-- 1 root hadoop 0 2022-11-02 22:05 /user/root/SRC_ATM_TRANS/_SUCCESS
-rw-r--r-- 1 root hadoop 531214815 2022-11-02 22:05 /user/root/SRC_ATM_TRANS/part-m-00000
[root@ip-172-31-52-72 ~]#

```

Command used to open 'part-m-00000' file:

`hadoop fs -cat /user/root/SRC_ATM_TRANS/part-m-00000`

Screenshot of the imported data:-

```

2017, December, 31, Sunday, 23, Active, 34, NCR, Skipperen, Vestre Alle, 2, 9000, 57.034, 9.908, DKK, MasterCard, 5109, Withdrawal, , 57.048, 9.919, 2624886, Aalborg, 277.5
2017, December, 31, Sunday, 23, Active, 57, NCR, HillerÅfÅ d, KÅfÅ, benhavnsvej, 31, 3400, 55.933, 12.314, DKK, VISA, 2690, Withdrawal, , 55.767, 12.433, 2621394, Gladsaks
2017, December, 31, Sunday, 23, Active, 6, NCR, Fredericia, SÅfÅ, llandsgade, 33, 7000, 55.564, 9.757, DKK, MasterCard, 8122, Withdrawal, , 55.566, 9.753, 2621951, Frederi
2017, December, 31, Sunday, 23, Active, 21, NCR, ÅfEsterÅfÅV MÅfÅ, ller, ÅfEsterÅfÅV, 12, 9000, 57.049, 9.922, DKK, Mastercard - on-us, 2542, Withdrawal, , 57.048, 9.9
2017, December, 31, Sunday, 23, Active, 6, NCR, Fredericia, SÅfÅ, llandsgade, 33, 7000, 55.564, 9.757, DKK, Visa Dankort, 8341, Withdrawal, , 55.566, 9.753, 2621951, Frede
2017, December, 31, Sunday, 23, Active, 51, NCR, Gistrup, Hadsundvej, 346, 9260, 56.997, 9.993, DKK, Visa Dankort, 4079, Withdrawal, , 56.994, 9.991, 2621449, Gistrup, 277.5
2017, December, 31, Sunday, 23, Active, 19, NCR, Kolding, Vejlevej, 135, 6000, 55.505, 9.457, DKK, MasterCard, 5374, Withdrawal, , 55.490, 9.472, 2618528, Kolding, 280.150
2017, December, 31, Sunday, 23, Active, 20, NCR, Bispensgade, Bispensgade, 35, 9800, 57.453, 9.996, DKK, Mastercard - on-us, 4630, Withdrawal, , 57.464, 9.982, 2620214, H
2017, December, 31, Sunday, 23, Active, 20, NCR, Bispensgade, Bispensgade, 35, 9800, 57.453, 9.996, DKK, Mastercard - on-us, 7031, Withdrawal, , 57.464, 9.982, 2620214, H
2017, December, 31, Sunday, 23, Active, 80, NCR, Menu KÅfÅ, bmand Klarup, Klarupvej, 52, 9270, 57.013, 10.046, DKK, MasterCard, 1263, Withdrawal, , 57.004, 10.101, 2612301
2017, December, 31, Sunday, 23, Active, 32, NCR, SÅfÅ, dding, Tarphagevej, 59, 6710, 55.498, 8.408, DKK, Visa Dankort, 5221, Withdrawal, , 55.467, 8.450, 2622447, Esbjerg, 2
2017, December, 31, Sunday, 23, Active, 63, NCR, Brugsen i Breum, AakjÅfÅ, rsvvej, 1, 7870, 56.688, 9.069, DKK, MasterCard, 2317, Withdrawal, , 56.586, 9.136, 2619908, Højsl
2017, December, 31, Sunday, 23, Inactive, 12, NCR, ÅfEsterÅfÅV Duus, ÅfEsterÅfÅV, 12, 9000, 57.049, 9.922, DKK, Visa Dankort - on-us, 5924, Withdrawal, , 57.048, 9.91
2017, December, 31, Sunday, 23, Active, 11, NCR, Sauersvej, Fridtjof Nansens Vej, 2, 9210, 57.023, 9.940, DKK, VISA, 2667, Withdrawal, , 57.048, 9.935, 2616235, NÅfÅ, rresu
2017, December, 31, Sunday, 23, Active, 46, Diebold Nixdorf, HelsingÅfÅ, r, Sct. Olai Gade, 39, 3000, 56.036, 12.612, DKK, Mastercard - on-us, 5563, Withdrawal, , 56.034
2017, December, 31, Sunday, 23, Active, 47, NCR, Frederiksberg, Gammel Kongevej, 157, 1850, 55.677, 12.537, DKK, MasterCard, 9815, Withdrawal, , 55.679, 12.535, 2621942, H
2017, December, 31, Sunday, 23, Active, 46, Diebold Nixdorf, HelsingÅfÅ, r, Sct. Olai Gade, 39, 3000, 56.036, 12.612, DKK, Mastercard - on-us, 2384, Withdrawal, , 56.034
2017, December, 31, Sunday, 23, Active, 64, NCR, Horsens, GrÅfÅ, nlandsvej, 5, 8700, 55.859, 9.854, DKK, Visa Dankort - on-us, 2475, Withdrawal, , 55.861, 9.850, 2619771, H
2017, December, 31, Sunday, 23, Active, 64, NCR, Horsens, GrÅfÅ, nlandsvej, 5, 8700, 55.859, 9.854, DKK, Visa Dankort - on-us, 5223, Withdrawal, , 55.861, 9.850, 2619771, H
2017, December, 31, Sunday, 23, Active, 64, NCR, Horsens, GrÅfÅ, nlandsvej, 5, 8700, 55.859, 9.854, DKK, Visa Dankort, 8690, Withdrawal, , 55.861, 9.850, 2619771, Horsens, 2
2017, December, 31, Sunday, 23, Active, 24, NCR, Hobro, Adelgade, 31, 9500, 56.638, 9.794, DKK, Mastercard - on-us, 7780, Withdrawal, , 56.643, 9.790, 2620167, Hobro, 277.5
2017, December, 31, Sunday, 23, Active, 20, NCR, Bispensgade, Bispensgade, 35, 9800, 57.453, 9.996, DKK, Mastercard - on-us, 2830, Withdrawal, , 57.464, 9.982, 2620214, H
2017, December, 31, Sunday, 23, Active, 28, NCR, LÅfÅ, gstÅfÅ, r, ÅfEsterbrogade, 8, 9670, 56.967, 9.253, DKK, VISA, 812, Withdrawal, , 56.962, 9.258, 2617467, Logstor, 277.5
2017, December, 31, Sunday, 23, Active, 49, NCR, Bindslev, NÅfÅ, rrebro, 18, 9881, 57.541, 10.200, DKK, MasterCard, 5403, Withdrawal, , 57.471, 10.203, 2614010, Sindal, 277.5
2017, December, 31, Sunday, 23, Active, 49, NCR, Bindslev, NÅfÅ, rrebro, 18, 9881, 57.541, 10.200, DKK, MasterCard, 312, Withdrawal, , 57.471, 10.203, 2614010, Sindal, 277.5
2017, December, 31, Sunday, 23, Active, 56, Diebold Nixdorf, KÅfÅ, ge, SÅfÅ, ndre Alle, 1, 4600, 55.454, 12.181, DKK, Visa Dankort - on-us, 5351, Withdrawal, , 55.588, 12.
2017, December, 31, Sunday, 23, Active, 103, Diebold Nixdorf, Vejgaard, Hadsundvej, 20, 9000, 57.043, 9.950, DKK, Mastercard - on-us, 5821, Withdrawal, , 57.048, 9.935, 2
2017, December, 31, Sunday, 23, Active, 1, NCR, NÅfÅ, stved, Farimagsvvej, 8, 4700, 55.233, 11.763, DKK, Visa Dankort, 3049, Withdrawal, , 55.230, 11.761, 2616038, Naestved,
2017, December, 31, Sunday, 23, Active, 85, Diebold Nixdorf, KÅfÅ, benhavn, Regnbuepladsen, 5, 1550, 55.676, 12.571, DKK, MasterCard, 7785, Withdrawal, , 55.676, 12.566, 2
2017, December, 31, Sunday, 23, Active, 15, NCR, Vestre, Kastetvej, 36, 9000, 57.053, 9.905, DKK, Mastercard - on-us, 9777, Withdrawal, , 57.048, 9.919, 2624886, Aalborg, 2
2017, December, 31, Sunday, 23, Active, 15, NCR, Vestre, Kastetvej, 36, 9000, 57.053, 9.905, DKK, Mastercard, 5531, Withdrawal, , 57.048, 9.919, 2624886, Aalborg, 277.589, 4
2017, December, 31, Sunday, 23, Active, 34, NCR, Skipperen, Vestre Alle, 2, 9000, 57.034, 9.908, DKK, MasterCard, 8323, Withdrawal, , 57.048, 9.919, 2624886, Aalborg, 277.5
2017, December, 31, Sunday, 23, Active, 20, NCR, Bispensgade, Bispensgade, 35, 9800, 57.453, 9.996, DKK, MasterCard, 5023, Withdrawal, , 57.464, 9.982, 2620214, Hjørring, 2
2017, December, 31, Sunday, 23, Active, 34, NCR, Skipperen, Vestre Alle, 2, 9000, 57.034, 9.908, DKK, MasterCard, 147, Withdrawal, , 57.048, 9.919, 2624886, Aalborg, 277.58
2017, December, 31, Sunday, 23, Active, 70, Diebold Nixdorf, Holstebro, Hostrupvej, 6, 7500, 56.373, 8.625, DKK, MasterCard, 5666, Withdrawal, , 56.360, 8.616, 2620046, H
2017, December, 31, Sunday, 23, Active, 49, NCR, Bindslev, NÅfÅ, rrebro, 18, 9881, 57.541, 10.200, DKK, MasterCard, 7886, Withdrawal, , 57.471, 10.203, 2614010, Sindal, 277.5
2017, December, 31, Sunday, 23, Inactive, 12, NCR, ÅfEsterÅfÅV Duus, ÅfEsterÅfÅV, 12, 9000, 57.049, 9.922, DKK, Mastercard - on-us, 2436, Withdrawal, , 57.048, 9.919
2017, December, 31, Sunday, 23, Inactive, 12, NCR, ÅfEsterÅfÅV Duus, ÅfEsterÅfÅV, 12, 9000, 57.049, 9.922, DKK, Mastercard - on-us, 8519, Withdrawal, , 57.048, 9.919
2017, December, 31, Sunday, 23, Active, 10, NCR, NÅfÅ, rresundby, Torvet, 6, 9400, 57.059, 9.922, DKK, Mastercard - on-us, 5286, Withdrawal, , 57.048, 9.919, 2624886, Aalb
2017, December, 31, Sunday, 23, Active, 37, NCR, Silkeborg, Borgergade, 36, 8600, 56.179, 9.552, DKK, VISA, 876, Withdrawal, , 56.170, 9.545, 2614030, Silkeborg, 279.800, 98
[root@ip-172-31-52-72 ~]#

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