

## Sqoop Import command used for importing a table from RDS to HDFS:

- Instal MySQL connector jar to run Scoop

```
sudo -i
wget https://de-mysql-connector.s3.amazonaws.com/mysql-connector-java-8.0.25.tar.gz
tar -xvf mysql-connector-java-8.0.25.tar.gz
sudo cp mysql-connector-java-8.0.25/mysql-connector-java-8.0.25.jar /usr/lib/sqoop/lib/
```

- Before importing the RDS dataset, a directory is created using the following command:

```
hadoop fs -mkdir -p /user/root/UPGRAD/ETL
```

- Using the scoop, Data is ingested from RDS to HDfs using the following:

```
Sqoop import--connectjdbc:mysql://upgraddetest.cyaiehc9bmnf.us-east-1.rds.amazonaws.com:3306/testdatabase
--username student
--password STUDENT123
--table SRC_ATM_TRANS
--target-dir /user/hadoop/UPGRAD/ETL -m 1
```

## The command used to see the list of imported data in HDFS:

- To count the files imported in the hdfs use the following command

```
< hadoop fs -cat /user/hadoop/UPGRAD/ETL/part-m-00000 | wc -l >
```

- To know the top 3 records following command is used:

```
root@ip-172-31-48-236:~
```

```
[root@ip-172-31-48-236 ~]# hadoop fs -ls -R /user/root/UPGRAD/ETL
[root@ip-172-31-48-236 ~]# hadoop fs -cat /user/hadoop/UPGRAD/ETL/part-m-00000 | wc -l
2468572
[root@ip-172-31-48-236 ~]#
```

```
< hadoop fs -cat /user/hadoop/UPGRAD/ETL/part-m-00000 | head -n 3 >
```

```
root@ip-172-31-48-236:~  
[root@ip-172-31-48-236 ~]# hadoop fs -cat /user/hadoop/UPGRAD/ETL/part-m-00000 | head -n 3  
2017,January,1,Sunday,0,Active,1,NCR,NÅfÅ;stved,Farimagsvej,8,4700,55.233,11.763,DKK,MasterCard,5643,Withdrawal,,,55.230,11.761,2616038,Naestved,281.150,1014  
,87,7,260,0.215,92,500,Rain,light rain  
2017,January,1,Sunday,0,Inactive,2,NCR,Vejgaard,Hadsundvej,20,9000,57.043,9.950,DKK,MasterCard,1764,Withdrawal,,,57.048,9.935,2616235,NÅfÅ,rresundby,280.640,  
1020,93,9,250,0.590,92,500,Rain,light rain  
2017,January,1,Sunday,0,Inactive,2,NCR,Vejgaard,Hadsundvej,20,9000,57.043,9.950,DKK,VISA,1891,Withdrawal,,,57.048,9.935,2616235,NÅfÅ,rresundby,280.640,1020,9  
3,9,250,0.590,92,500,Rain,light rain  
cat: Unable to write to output stream.  
[root@ip-172-31-48-236 ~]#
```

## Screenshot of the imported data:

```
root@ip-172-31-48-236:~  
2024-01-22 16:40:39,371 INFO mapreduce.Job: map 100% reduce 0%  
2024-01-22 16:40:39,380 INFO mapreduce.Job: Job job_1705940468658_0001 completed successfully  
2024-01-22 16:40:39,521 INFO mapreduce.Job: Counters: 33  
File System Counters  
FILE: Number of bytes read=0  
FILE: Number of bytes written=298029  
FILE: Number of read operations=0  
FILE: Number of large read operations=0  
FILE: Number of write operations=0  
HDFS: Number of bytes read=85  
HDFS: Number of bytes written=531214815  
HDFS: Number of read operations=6  
HDFS: Number of large read operations=0  
HDFS: Number of write operations=2  
HDFS: Number of bytes read erasure-coded=0  
Job Counters  
Launched map tasks=1  
Other local map tasks=1  
Total time spent by all maps in occupied slots (ms)=1212912  
Total time spent by all reduces in occupied slots (ms)=0  
Total time spent by all map tasks (ms)=25269  
Total vcore-milliseconds taken by all map tasks=25269  
Total megabyte-milliseconds taken by all map tasks=38813184  
Map-Reduce Framework  
Map input records=2468572  
Map output records=2468572  
Input split bytes=85  
Spilled Records=0  
Failed Shuffles=0  
Merged Map outputs=0  
GC time elapsed (ms)=229  
CPU time spent (ms)=28430  
Physical memory (bytes) snapshot=631095296  
Virtual memory (bytes) snapshot=3085852672  
Total committed heap usage (bytes)=595066880  
Peak Map Physical memory (bytes)=640131072  
Peak Map Virtual memory (bytes)=3094335488  
File Input Format Counters  
Bytes Read=0  
File Output Format Counters  
Bytes Written=531214815  
2024-01-22 16:40:39,533 INFO mapreduce.ImportJobBase: Transferred 506.6059 MB in 43.1468 seconds (11.7415 MB/sec)  
2024-01-22 16:40:39,536 INFO mapreduce.ImportJobBase: Retrieved 2468572 records.  
[root@ip-172-31-48-236 ~]#
```