Task 1: Export a HDFS file into RDBMS SQL table

Use Sqoop tool to export data present in SQOOPOUT folder made while demo of Import table

We have created a table Person in the class as below and now I am try to put the data into a another RDMS table Persons.

For export the table should be present in RDBMS before running the export command

Command for putting SQL data into HDFS

sqoop import --connect jdbc:mysql://localhost/simplidb --table Person --username root --password Root@123 --target-dir /sqoopoutP -m 1

```
18/08/21 02:42:18 ERBOR tool.ExportTool: Encountered IOException running export job: java.io.IOException: No columns to generate for ClassWriter You have new mail in /var/spool/mail/acadgild [acadgild]Gocalhost ~]S sqoop import --connect jdbc:mysql://localhost/simplidb --table Person --username root --password Root@123 --target-dir /sqoopoutP -m 1 Marning: /home/acadgild/install/sqoop/sqoop-1.4.6.bin_hadoop-2.0.4-alpha/../hcatalog does not exist! McCatalog jobs will fail.

Please set $McCal MUNE to the root of your McCatalog installation.

Avarning: /home/acadgild/install/sqoop/sqoop-1.4.6.bin_hadoop-2.0.4-alpha/../accumulo does not exist! Accumulo imports will fail.

Please set $ACCUMULO HOME to the root of your Accumulo installation.

18/08/21 02:48:13 INFO sqoop.Sqoop: Running Sqoop version: 1.4.6

18/08/21 02:48:13 INFO sqoop.Sqoop: Running Sqoop version: 1.4.6

18/08/21 02:48:13 INFO manager_MySoUManager: Preparing to use a MySoU streaming resultset.

18/08/21 02:48:13 INFO manager_MySoUManager: Preparing to use a MySoU streaming resultset.

18/08/21 02:48:13 INFO manager_MySoUManager: Exacuting SSL connection without server's identity verification is not recommended. According to MySoU 5.5.45+, 5.6.26+ and 5.7.6+ requirements SSL connection must be established by default if explicit option isn't set. For compliance with existing applications not using SSL the verifyServerCertificate verification.

18/08/21 02:48:15 INFO manager.SqlManager: Executing SOL statement: SELECT t.* FROM 'Person' AS t LIMIT 1

18/08/21 02:48:15 INFO manager.SqlManager: Executing SOL statement: SELECT t.* FROM 'Person' AS t LIMIT 1

18/08/21 02:48:15 INFO manager.SqlManager: Executing SOL statement: SELECT t.* FROM 'Person' AS t LIMIT 1

18/08/21 02:48:15 INFO manager.SqlManager: Executing SOL statement: SELECT t.* FROM 'Person' AS t LIMIT 1

18/08/21 02:48:15 INFO manager.SqlManager: Fixed this statement: SELECT t.* FROM 'Person' AS t LIMIT 1

18/08/21 02:48:18 INFO manager.MySoUManager: primager: Writing jar file: /tmp/sqoop-aca
```

In SqoopoutP content is saved

```
File Input Format Counters
Bytes Read=0
File Output Format Counters
Bytes Written=311
18/08/21 02:48:42 INFO mapreduce.ImportJobBase: Transferred 311 bytes in 23.4498 seconds (13.2624 bytes/sec)
18/08/21 02:48:42 INFO mapreduce.ImportJobBase: Retrieved 10 records.
You have new mail in /var/spool/mail/acadgild
[acadgild@localhost -|$ hadoop dfs -ls /sqoopoutP
DEPRECATED: Use of this script to execute hdfs command is deprecated.
Instead use the hdfs command for it.

18/08/21 02:48:55 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable found 2 items
-rw-r-r-- 1 acadgild supergroup 0 2018-08-21 02:48 /sqoopoutP/SUCCESS
-rw-r-r-- 1 acadgild supergroup 311 2018-08-21 02:48 /sqoopoutP/part-m-00000
[acadgild@localhost -|$ hadoop dfs -cat /sqoopoutP/part-m-00000
[acadgild@localhost -|$ hadoop dfs -cat /sqoopoutP/part-m-00000
DEPRECATED: Use of this script to execute hdfs command is deprecated.
Instead use the hdfs command for it.

18/08/21 02:49:30 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable hitech, Hyderabad, Sagar, Vidya, 2
Hitech, Hyderabad, Sagar, Vidya, 3
Hitech, Hyderabad, Sagar, Vidya, 4
Hitech, Hyderabad, Sagar, Vidya, 5
Hitech, Hyderabad, Sagar, Vidya, 6
Hitech, Hyderabad, Sagar, Vidya, 7
Hitech, Hyderabad, Sagar, Vidya, 8
Hitech, Hyderabad, Sagar, Vidya, 9
Hitech, Hyderabad, Sagar, Vidya, 10
[acadgild@localhots -| $
```

Command Used to export the data bact to RDBMS SQL db Table Persons

[acadgild@localhost ~]\$ sqoop export --connect jdbc:mysql://localhost/simplidb --username root --password Root@123 --table Persons --export-dir=/sqoopoutP/part-m-00000 -m 1

```
Last login: Tue Aug 21 01:45:14 2018 from 10.0-2.2 [acadqild@iocalbest = | $ sqoop export --connect jdbc:mysql://localhost/simplidb --username root --password Root@123 --table Persons --export-dir=/sqoopoutP/par tan-808000 ml
tan-808000 ml
Aurning; /home/acadqild/install/sqoop/sqoop-1.4.6.bin hadoop-2.0.4-alpha/./hcatalog does not exist! HCatalog jobs will fail.

**Please set $HCA! HOME to the root of your HCatalog installation.

**Marning: /home/acadqild/install/sqoop/sqoop-1.4.6.bin hadoop-2.0.4-alpha/./accumulo does not exist! Accumulo imports will fail.

**Please set $ACCUMMLD HOME to the root of your Accumulo installation.

**Marning: /home/acadqild/install/sqoop/sqoop: Running $qoop versions: 1.4.6.

**Blook/10 02:55:07 MWN tool.BoxeSpooplool: Setting your password on the command-line is insecure. Consider using -P instead.

**Blook/10 02:55:07 MWN tool.Codecentool: Beginning code generation.

**Blook/10 02:55:07 BIST 2018 WWN: Establishing SSL connection without server's identity verification is not recommended. According to MySQL 5.5-45+, 5.6.26+

**Mol 57.6+ Tequirements SSL connection must be established by default if explicit option isn't set. For compliance with existing applications not using SSL the verifyserverCertificate property is set to 'false', You need either to explicitly disable SSL by settling uses SSL=false, or set useSSL=true and provide trusts tore for server certificate verification.

**Blook/10 02:55:09 BIMFO manager.SqlManager: Executing SOL statement: SELECT t.* FROM 'Persons' AS t LIMIT 1

**Blook/10 02:55:09 BIMFO manager.SqlManager: Executing SOL statement: SELECT t.* FROM 'Persons' AS t LIMIT 1

**Blook/10 02:55:09 BIMFO manager.SqlManager: Executing SOL statement: SELECT t.* FROM 'Persons' AS t LIMIT
```

Warning: /home/acadgild/install/sqoop/sqoop-1.4.6.bin_hadoop-2.0.4-alpha/../hcatalog does not exist! HCatalog jobs will fail.

Please set \$HCAT_HOME to the root of your HCatalog installation.

Warning: /home/acadgild/install/sqoop/sqoop-1.4.6.bin_hadoop-2.0.4-alpha/../accumulo does not exist! Accumulo imports will fail.

Please set \$ACCUMULO_HOME to the root of your Accumulo installation.

18/08/21 02:56:07 INFO sqoop.Sqoop: Running Sqoop version: 1.4.6

 $18/08/21\ 02:56:07\ WARN\ tool. Base Sqoop Tool:\ Setting\ your\ password\ on\ the\ command-line\ is\ insecure.\ Consider\ using\ -P\ instead.$

18/08/21 02:56:07 INFO manager.MySQLManager: Preparing to use a MySQL streaming resultset.

18/08/21 02:56:07 INFO tool.CodeGenTool: Beginning code generation

Tue Aug 21 02:56:08 IST 2018 WARN: Establishing SSL connection without server's identity verification is not recommended. According to MySQL 5.5.45+, 5.6.26+ and 5.7.6+ requirements SSL connection must be established by default if explicit option isn't set. For compliance with existing applications not using SSL the verifyServerCertificate property is set to 'false'. You need either to explicitly disable SSL by setting useSSL=false, or set useSSL=true and provide truststore for server certificate verification.

18/08/21 02:56:09 INFO manager.SqlManager: Executing SQL statement: SELECT t.* FROM `Persons` AS t LIMIT 1

18/08/21 02:56:09 INFO manager.SqlManager: Executing SQL statement: SELECT t.* FROM `Persons` AS t LIMIT 1

18/08/21 02:56:09 INFO orm.CompilationManager: HADOOP_MAPRED_HOME is /home/acadgild/install/hadoop/hadoop-2.6.5

Note: /tmp/sqoop-acadgild/compile/db29626a71f12f9c3a75f26d0b5ed2c9/Persons.java uses or overrides a deprecated API.

Note: Recompile with -Xlint:deprecation for details.

 $18/08/21\ 02:56:12\ INFO\ orm. Compilation Manager:\ Writing\ jar\ file:\ /tmp/sqoop-acadgild/compile/db29626a71f12f9c3a75f26d0b5ed2c9/Persons. jar$

18/08/21 02:56:12 INFO mapreduce.ExportJobBase: Beginning export of Persons

SLF4J: Class path contains multiple SLF4J bindings.

SLF4J: Found binding in [jar:file:/home/acadgild/install/hadoop/hadoop-2.6.5/share/hadoop/common/lib/slf4j-log4j12-1.7.5.jar!/org/slf4j/impl/StaticLoggerBinder.class]

SLF4J: Found binding in [jar:file:/home/acadgild/install/hbase/hbase-1.2.6/lib/slf4j-log4j12-1.7.5.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]

18/08/21 02:56:12 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable

 $18/08/21\ 02:56:12\ INFO\ Configuration. deprecation:\ mapred. jar\ is\ deprecated.\ Instead,\ use\ mapreduce. job. jar\ operation.$

18/08/21 02:56:14 INFO Configuration.deprecation: mapred.reduce.tasks.speculative.execution is deprecated. Instead, use mapreduce.reduce.speculative

18/08/21 02:56:14 INFO Configuration.deprecation: mapred.map.tasks.speculative.execution is deprecated. Instead, use mapreduce.map.speculative

18/08/21 02:56:14 INFO Configuration.deprecation: mapred.map.tasks is deprecated. Instead, use mapreduce.job.maps

 $18/08/21\ 02:56:14\ INFO\ client. RMProxy:\ Connecting\ to\ Resource Manager\ at\ local host/127.0.0.1:8032$

18/08/21 02:56:16 INFO input.FileInputFormat: Total input paths to process: 1

 $18/08/21\ 02:56:16\ INFO\ input. File Input Format:\ Total\ input\ paths\ to\ process:1$

18/08/21 02:56:16 INFO mapreduce.JobSubmitter: number of splits:1

18/08/21 02:56:16 INFO Configuration.deprecation: mapred.map.tasks.speculative.execution is deprecated. Instead, use mapreduce.map.speculative

18/08/21 02:56:16 INFO mapreduce. JobSubmitter: Submitting tokens for job: job_1534795797035_0006

 $18/08/21\ 02:56:17\ INFO\ impl.\ Yarn Client Impl:\ Submitted\ application\ application_1534795797035_0006$

 $18/08/21\ 02:56:17\ INFO\ map reduce. Job:\ The\ url\ to\ track\ the\ job:\ http://localhost: 8088/proxy/application_1534795797035_0006/100006/100006/10006/10006/10006/10006/100006/100006/10006/10006/10006/10006/10$

18/08/21 02:56:17 INFO mapreduce.Job: Running job: job_1534795797035_0006

 $18/08/21\ 02:56:27\ INFO\ map reduce. Job: Job\ job_1534795797035_0006\ running\ in\ uber\ mode: false$

18/08/21 02:56:27 INFO mapreduce.Job: map 0% reduce 0%

18/08/2102:56:36 INFO mapreduce. Job: map
 100% reduce 0%

18/08/21 02:56:37 INFO mapreduce.Job: Job job_1534795797035_0006 completed successfully

18/08/21 02:56:37 INFO mapreduce.Job: Counters: 30

File System Counters

FILE: Number of bytes read=0

FILE: Number of bytes written=127558

FILE: Number of read operations=0

FILE: Number of large read operations=0

FILE: Number of write operations=0

HDFS: Number of bytes read=439

HDFS: Number of bytes written=0

HDFS: Number of read operations=4

HDFS: Number of large read operations=0

HDFS: Number of write operations=0

Job Counters

Launched map tasks=1

Data-local map tasks=1

Total time spent by all maps in occupied slots (ms)=6185

Total time spent by all reduces in occupied slots (ms)=0

Total time spent by all map tasks (ms)=6185

Total vcore-milliseconds taken by all map tasks=6185

Total megabyte-milliseconds taken by all map tasks=6333440

Map-Reduce Framework

Map input records=10

Map output records=10

Input split bytes=125

Spilled Records=0

Failed Shuffles=0

Merged Map outputs=0

GC time elapsed (ms)=112

CPU time spent (ms)=1690

Physical memory (bytes) snapshot=108617728

Virtual memory (bytes) snapshot=2061332480

Total committed heap usage (bytes)=32571392

File Input Format Counters

Bytes Read=0

File Output Format Counters

Bytes Written=0

18/08/21 02:56:37 INFO mapreduce.ExportJobBase: Transferred 439 bytes in 23.1166 seconds (18.9907 bytes/sec)

18/08/21 02:56:37 INFO mapreduce.ExportJobBase: Exported 10 records.

Below is the table.



Task 2: To Import a row from RDBMS table to HDFS

Use Sqoop tool to Import data present in SQOOPOUT folder made while demo of Import table

with parameter person_id =3.

Command to put a single row using where clause

[acadgild@localhost ~]\$ sqoop import --connect jdbc:mysql://localhost/simplidb -username root --password Root@123 --query 'select * from Person where (person_id=3) AND \$CONDITIONS' --split-by person_id --target-dir /queryoutput

```
| Comparison of the Comparison
```

You have new mail in /var/spool/mail/acadgild

[acadgild@localhost ~]\$ sqoop import --connect jdbc:mysql://localhost/simplidb --username root --password Root@123 --query 'select * from Person where (person_id=3) AND \$CONDITIONS' --split-by person_id --target-dir /queryoutput

Warning: /home/acadgild/install/sqoop/sqoop-1.4.6.bin_hadoop-2.0.4-alpha/../hcatalog does not exist! HCatalog jobs will fail.

Please set \$HCAT_HOME to the root of your HCatalog installation.

Warning: /home/acadgild/install/sqoop/sqoop-1.4.6.bin_hadoop-2.0.4-alpha/../accumulo does not exist! Accumulo imports will fail.

Please set \$ACCUMULO_HOME to the root of your Accumulo installation.

18/08/21 06:48:52 INFO sqoop. Sqoop: Running Sqoop version: 1.4.6

18/08/21 06:48:52 WARN tool.BaseSqoopTool: Setting your password on the command-line is insecure. Consider using -P instead.

18/08/21 06:48:52 INFO manager. MySQLManager: Preparing to use a MySQL streaming resultset.

 $18/08/21\ 06:48:52\ INFO\ tool. Code Gen Tool:\ Beginning\ code\ generation$

Tue Aug 21 06:48:53 IST 2018 WARN: Establishing SSL connection without server's identity verification is not recommended. According to MySQL 5.5.45+, 5.6.26+ and 5.7.6+ requirements SSL connection must be established by default if explicit option isn't set. For compliance with existing applications not using SSL the verifyServerCertificate property is set to 'false'. You need either to explicitly disable SSL by setting useSSL=false, or set useSSL=true and provide truststore for server certificate verification.

18/08/21 06:48:54 INFO manager.SqlManager: Executing SQL statement: select * from Person where (person_id=3) AND (1 = 0)

18/08/21 06:48:54 INFO manager. SqlManager: Executing SQL statement: select * from Person where (person_id=3) AND (1 = 0)

18/08/21 06:48:54 INFO manager.SqlManager: Executing SQL statement: select * from Person where (person_id=3) AND (1 = 0)

18/08/21 06:48:54 INFO orm.CompilationManager: HADOOP MAPRED HOME is /home/acadgild/install/hadoop/hadoop-2.6.5

 $Note: \\ /tmp/sqoop-acadgild/compile/82af7d7bfd14a23d1fb977e967af1b65/QueryResult. \\ java~uses~or~overrides~a~deprecated~API.$

Note: Recompile with -Xlint:deprecation for details.

18/08/21 06:48:57 INFO orm.CompilationManager: Writing jar file: /tmp/sqoop-acadgild/compile/82af7d7bfd14a23d1fb977e967af1b65/QueryResult.jar

18/08/21 06:48:57 INFO mapreduce.ImportJobBase: Beginning query import.

SLF4J: Class path contains multiple SLF4J bindings.

SLF4J: Found binding in [jar:file:/home/acadgild/install/hadoop/hadoop-2.6.5/share/hadoop/common/lib/slf4j-log4j12-1.7.5.jar!/org/slf4j/impl/StaticLoggerBinder.class]

SLF4J: Found binding in [jar:file:/home/acadgild/install/hbase/hbase-1.2.6/lib/slf4j-log4j12-

1.7.5.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]

18/08/21 06:48:57 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable

18/08/21 06:48:57 INFO Configuration.deprecation: mapred.jar is deprecated. Instead, use mapreduce.job.jar

18/08/21 06:48:58 INFO Configuration.deprecation: mapred.map.tasks is deprecated. Instead, use mapreduce.job.maps

18/08/21 06:48:58 INFO client.RMProxy: Connecting to ResourceManager at localhost/127.0.0.1:8032

Tue Aug 21 06:49:01 IST 2018 WARN: Establishing SSL connection without server's identity verification is not recommended. According to MySQL 5.5.45+, 5.6.26+ and 5.7.6+ requirements SSL connection must be established by default if explicit option isn't set. For compliance with existing applications not using SSL the verifyServerCertificate property is set to 'false'. You need either to explicitly disable SSL by setting useSSL=false, or set useSSL=true and provide truststore for server certificate verification.

18/08/21 06:49:01 INFO db.DBInputFormat: Using read committed transaction isolation

18/08/21 06:49:01 INFO db.DataDrivenDBInputFormat: BoundingValsQuery: SELECT MIN(person_id), MAX(person_id) FROM (select * from Person where (person_id=3) AND (1 = 1)) AS t1

18/08/21 06:49:01 INFO mapreduce.JobSubmitter: number of splits:1

18/08/21 06:49:02 INFO mapreduce.JobSubmitter: Submitting tokens for job: job_1534805353587_0002

18/08/21 06:49:02 INFO impl. YarnClientImpl: Submitted application application_1534805353587_0002

18/08/21 06:49:02 INFO mapreduce.Job: Running job: job_1534805353587_0002

18/08/21 06:49:13 INFO mapreduce.Job: Job job_1534805353587_0002 running in uber mode : false

 $18/08/21\ 06{:}49{:}13\ INFO\ mapreduce.Job:\ map\ 0\%\ reduce\ 0\%$

18/08/21 06:49:22 INFO mapreduce.Job: map 100% reduce 0%

18/08/21 06:49:22 INFO mapreduce.Job: Job job_1534805353587_0002 completed successfully

18/08/21 06:49:22 INFO mapreduce.Job: Counters: 30

File System Counters

FILE: Number of bytes read=0

FILE: Number of bytes written=127946

FILE: Number of read operations=0

FILE: Number of large read operations=0

 $\label{eq:FILE: Number of write operations = 0} FILE: \ Number \ of \ write \ operations = 0$

HDFS: Number of bytes read=109

HDFS: Number of bytes written=31

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)=6307

Total time spent by all reduces in occupied slots (ms)=0

Total time spent by all map tasks (ms)=6307

Total vcore-milliseconds taken by all map tasks=6307

Total megabyte-milliseconds taken by all map tasks=6458368

Map-Reduce Framework

Map input records=1

Map output records=1

Input split bytes=109

Spilled Records=0

Failed Shuffles=0

Merged Map outputs=0

GC time elapsed (ms)=125

CPU time spent (ms)=1860

Physical memory (bytes) snapshot=110280704

Virtual memory (bytes) snapshot=2063437824

Total committed heap usage (bytes)=32571392

File Input Format Counters

Bytes Read=0

File Output Format Counters

Bytes Written=31

18/08/21 06:49:22 INFO mapreduce.ImportJobBase: Transferred 31 bytes in 24.1274 seconds (1.2848 bytes/sec)

 $18/08/21\ 06:49:22\ INFO\ map reduce. Import Job Base:\ Retrieved\ 1\ records.$

In queryoutput folder the one record is present

```
[acadgild@localhost ~]$ hdfs dfs ~ls /queryoutput

18/08/21 07:15:10 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable

*Found 2 items

*Fw-r--r- 1 acadgild supergroup 0 2018-08-21 06:49 /queryoutput/_SUCCESS

*Fw-r--r- 1 acadgild supergroup 31 2018-08-21 06:49 /queryoutput/part-m-00000

[acadgild@localhost -]$ hdfs dfs -cat /queryoutput/part-m-00000

18/08/21 07:15:33 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable

3, Vidya, Sagar, Hitech, Hyderabad

[acadgild@localhost -]$ ■
```

[acadgild@localhost \sim]\$ hdfs dfs -ls /queryoutput

18/08/21 07:15:10 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable

Found 2 items

-rw-r--r- 1 acadgild supergroup 0 2018-08-21 06:49 /queryoutput/_SUCCESS

-rw-r--r- 1 acadgild supergroup 31 2018-08-21 06:49 /queryoutput/part-m-00000

[acadgild@localhost ~]\$ hdfs dfs -cat /queryoutput/part-m-00000

18/08/21 07:15:33 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable

 ${\it 3, Vidya, Sagar, Hitech, Hyderabad}$

[acadgild@localhost ~]\$