

Moving Hive Table from one database to another

Use Case

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Moving Hive table from one database to other database

Problem Statement:

Here, we are trying to move the table created in one database to another database using Hive.

Important Links:

Hive Installation guide:

<http://www.edureka.co/blog/apache-hive-installation-on-ubuntu>

Edureka VM Installation:

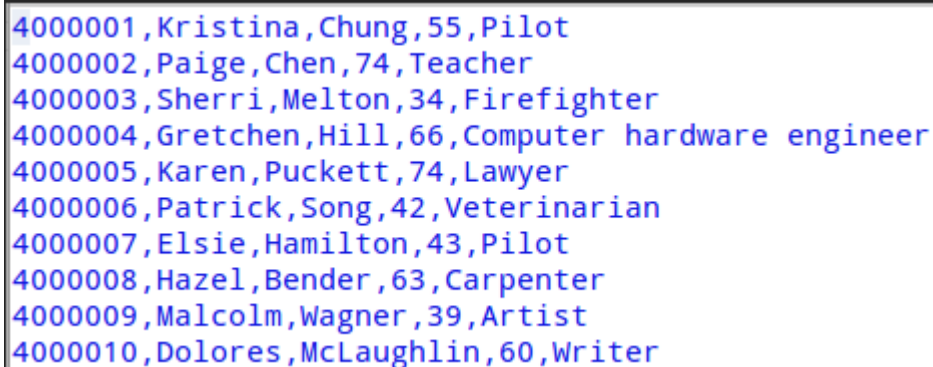
Please refer to Installation guide section present in the LMS for accessing the Edureka VM Installation Guide.

Codes along with the Dataset:

https://edureka.wistia.com/medias/m61n55dtxp/download?media_file_id=66367933

Dataset:

Let us consider a sample dataset as in the below screenshot.



```
4000001,Kristina,Chung,55,Pilot
4000002,Paige,Chen,74,Teacher
4000003,Sherri,Melton,34,Firefighter
4000004,Gretchen,Hill,66,Computer hardware engineer
4000005,Karen,Puckett,74,Lawyer
4000006,Patrick,Song,42,Veterinarian
4000007,Elsie,Hamilton,43,Pilot
4000008,Hazel,Bender,63,Carpenter
4000009,Malcolm,Wagner,39,Artist
4000010,Dolores,McLaughlin,60,Writer
```

Dataset Description:

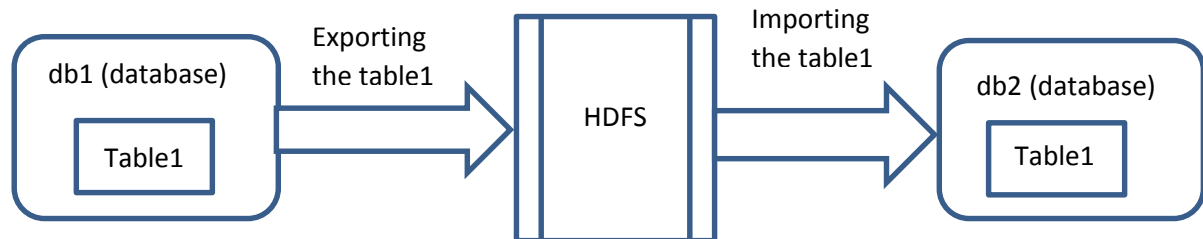
The above data represents the customer details which includes the below fields:

- customer id
- customer name
- age
- profession

Tools and Technologies used:

- Hive

Dataflow Diagram:



Implementation:

To transfer the table from one database to another in hive first we need to create two databases and a table in one of the database, load the data into it. Later we will use the export and import commands of hive to move the table into other database.

Let us see how to do that:

First let us log into hive shell and create two databases.

Command: hive

Command: create database db1;

Command: create database db2;

Creating two
databases in hive

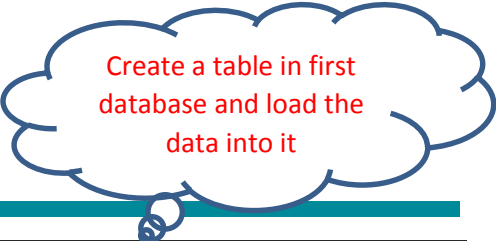
```
[edureka@localhost ~]$hive
Logging initialized using configuration in jar:file:/opt/apache-hive-0.14.0-bin/lib/hive-common-0.14.0.jar!/hive-log4j.properties
SLF4J: Class path contains multiple SLF4J bindings.
SLF4J: Found binding in [jar:file:/opt/hadoop-2.3.0/share/hadoop/common/lib/slf4j-log4j12-1.7.5.jar!/org/slf4j/impl/StaticLoggerBinder.class]
SLF4J: Found binding in [jar:file:/opt/apache-hive-0.14.0-bin/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]
hive> create database db1;
OK
Time taken: 0.43 seconds
hive> create database db2;
OK
Time taken: 0.046 seconds
hive>
```

Now let us create a table in **db1** database and load the data into it.

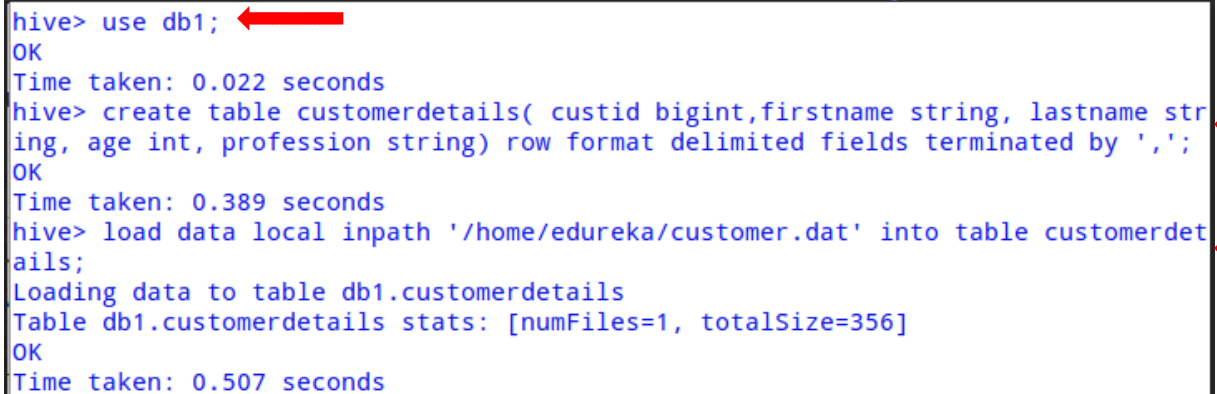
Command: use db1;

Command: create table customerdetails(custid bigint, firstname string, lastname string, age int, profession string) row format delimited fields terminated by ',';

Command: load data local inpath '/home/edureka/customer.dat' into table customerdetails;



Create a table in first database and load the data into it



```
hive> use db1;
OK
Time taken: 0.022 seconds
hive> create table customerdetails( custid bigint,firstname string, lastname string, age int, profession string) row format delimited fields terminated by ',';
OK
Time taken: 0.389 seconds
hive> load data local inpath '/home/edureka/customer.dat' into table customerdetails;
Loading data to table db1.customerdetails
Table db1.customerdetails stats: [numFiles=1, totalSize=356]
OK
Time taken: 0.507 seconds
```

Let us check if the data is loaded correctly into table or not.

Command: select * from customerdetails;

Check if the data is loaded correctly into the table or not.

```
hive> select * from customerdetails; ←
OK
4000001 Kristina      Chung  55      Pilot
4000002 Paige    Chen   74      Teacher
4000003 Sherri   Melton 34      Firefighter
4000004 Gretchen  Hill   66      Computer hardware engineer
4000005 Karen    Puckett 74      Lawyer
4000006 Patrick  Song   42      Veterinarian
4000007 Elsie    Hamilton 43      Pilot
4000008 Hazel    Bender  63      Carpenter
4000009 Malcolm  Wagner 39      Artist
4000010 Dolores  McLaughlin 60      Writer
Time taken: 0.175 seconds, Fetched: 10 row(s)
hive>
```

From the above screenshot we can see that the data is loaded correctly.

Now let us export the table into HDFS.

Command: export table customerdetails to '/hdfs_export_cust';

Note: After execution of above statement we should be able to find '/hdfs_export_cust' file in HDFS. You can give any name to this file.

Now let us cross check if there is a table known as 'customerdetails' is existing or not.

Command: use db2;

Command: show tables;

From the below screenshot we can understand there is no such table existing in the db2 databases.

Hence let us import the table 'customerdetails' from HDFS to db2 database of hive.

Command: use db2;

Command: import from '/hdfs_export_cust';

Exporting the table
into HDFS

```
hive> export table customerdetails to '/hdfs_export_cust';
Copying data from file:/tmp/edurekalab/93b98e10-b698-42dc-9df5-20fe964df2f5/hive_2014-12-31_15-42-47_032_5881708542899891702-1/-local-10000/_metadata
Copying file: file:/tmp/edurekalab/93b98e10-b698-42dc-9df5-20fe964df2f5/hive_2014-12-31_15-42-47_032_5881708542899891702-1/-local-10000/_metadata
Copying data from hdfs://opt-edu-057:9000/user/hive/warehouse/db1.db/customerdetails
Copying file: hdfs://opt-edu-057:9000/user/hive/warehouse/db1.db/customerdetails/customer.dat
OK
Time taken: 0.126 seconds
hive> use db2;
OK
Time taken: 0.012 seconds
hive> show tables;
OK
Time taken: 0.031 seconds
hive> import from '/hdfs_export_cust';
Copying data from hdfs://opt-edu-057:9000/hdfs_export_cust/data
Copying file: hdfs://opt-edu-057:9000/hdfs_export_cust/data/customer.dat
Loading data to table db2.customerdetails
OK
Time taken: 0.189 seconds
```

use db2 database to which we need to transfer the table

Import the table from hdfs to db2 database

Let us check if the table 'customerdetails' is imported into db2 database or not. If yes whether the data is loaded correctly or not.

Command: show tables;

Crosschecking if table
is imported or not

```
hive> show tables;
OK
customerdetails
Time taken: 0.023 seconds, Fetched: 1 row(s)
hive> select * from customerdetails;
OK
4000001 Kristina Chung 55 Pilot
4000002 Paige Chen 74 Teacher
4000003 Sherri Melton 34 Firefighter
4000004 Gretchen Hill 66 Computer hardware engineer
4000005 Karen Puckett 74 Lawyer
4000006 Patrick Song 42 Veterinarian
4000007 Elsie Hamilton 43 Pilot
4000008 Hazel Bender 63 Carpenter
4000009 Malcolm Wagner 39 Artist
4000010 Dolores McLaughlin 60 Writer
Time taken: 0.045 seconds, Fetched: 10 row(s)
hive>
```

We have successfully moved the table from one database to other database using Hive!!!

Reference Links:

<https://cwiki.apache.org/confluence/display/Hive/LanguageManual+ImportExport#LanguageManualImportExport-Import/Export>

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