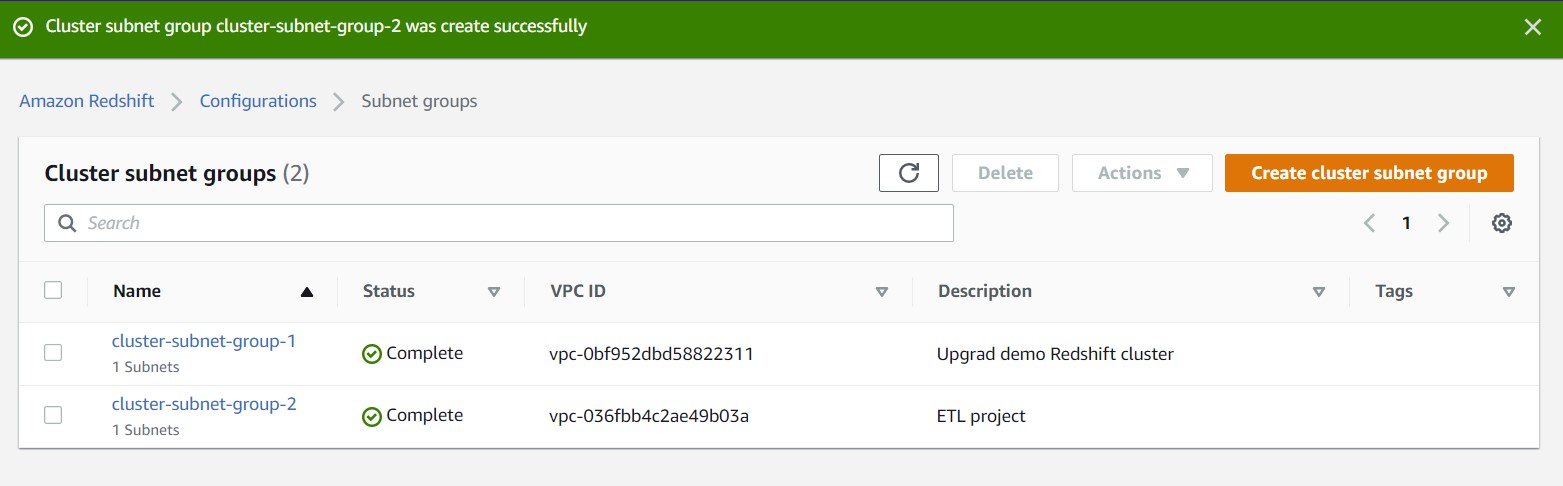
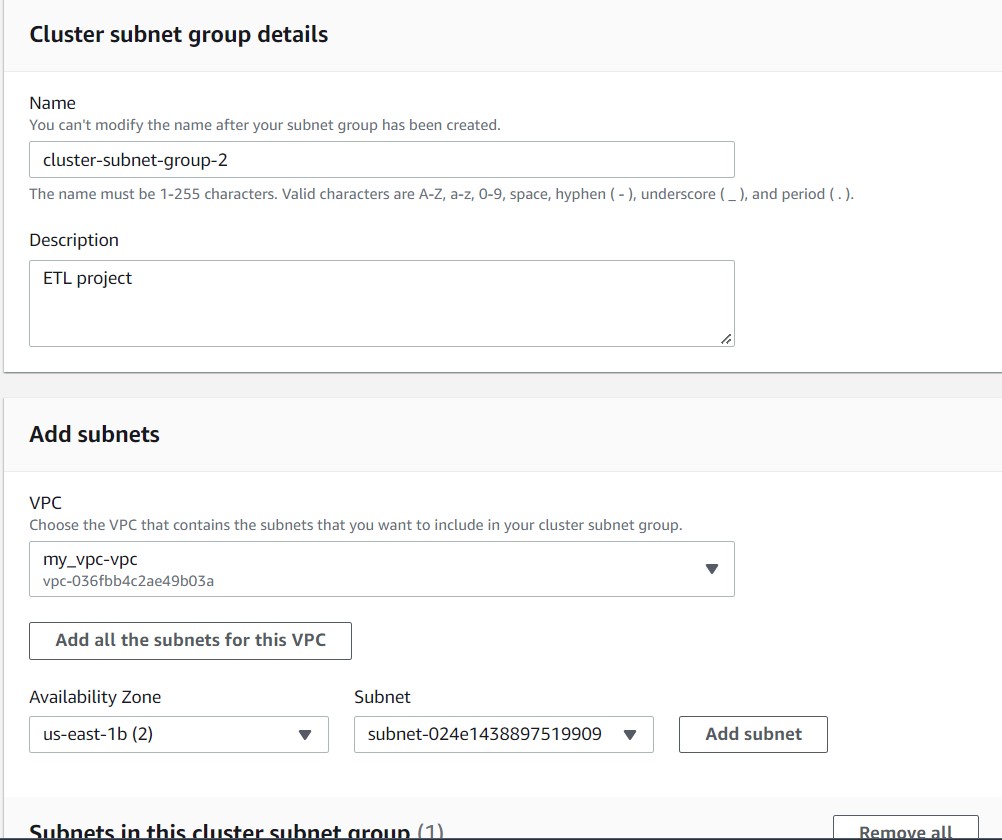
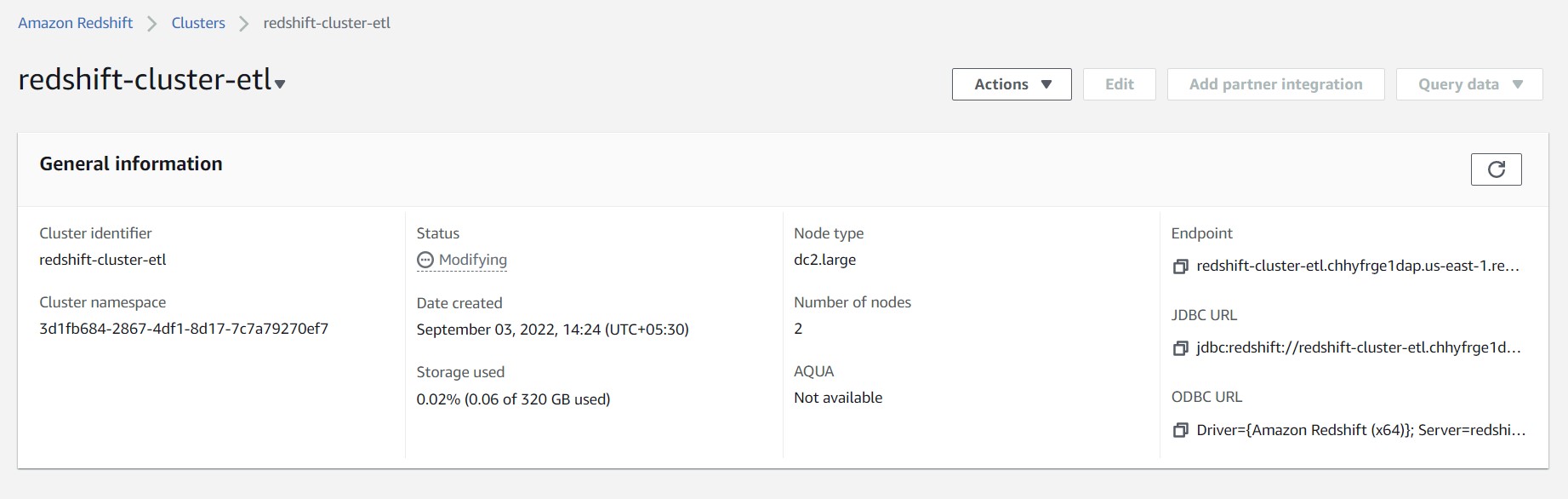
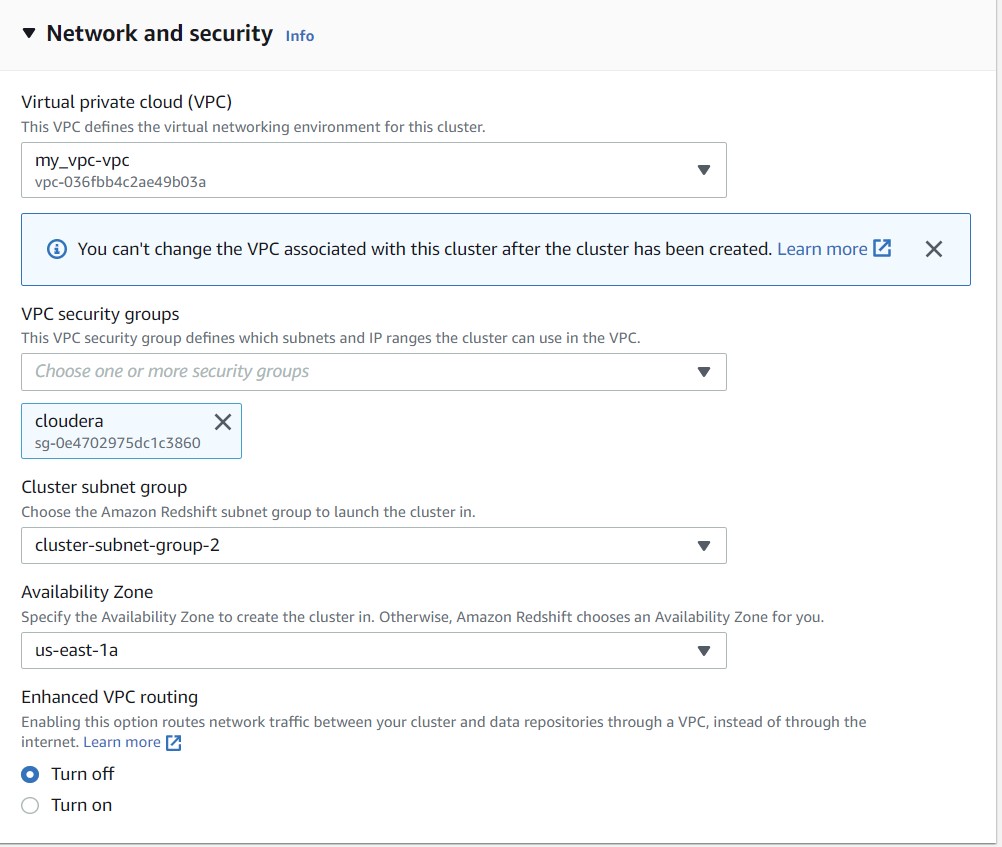
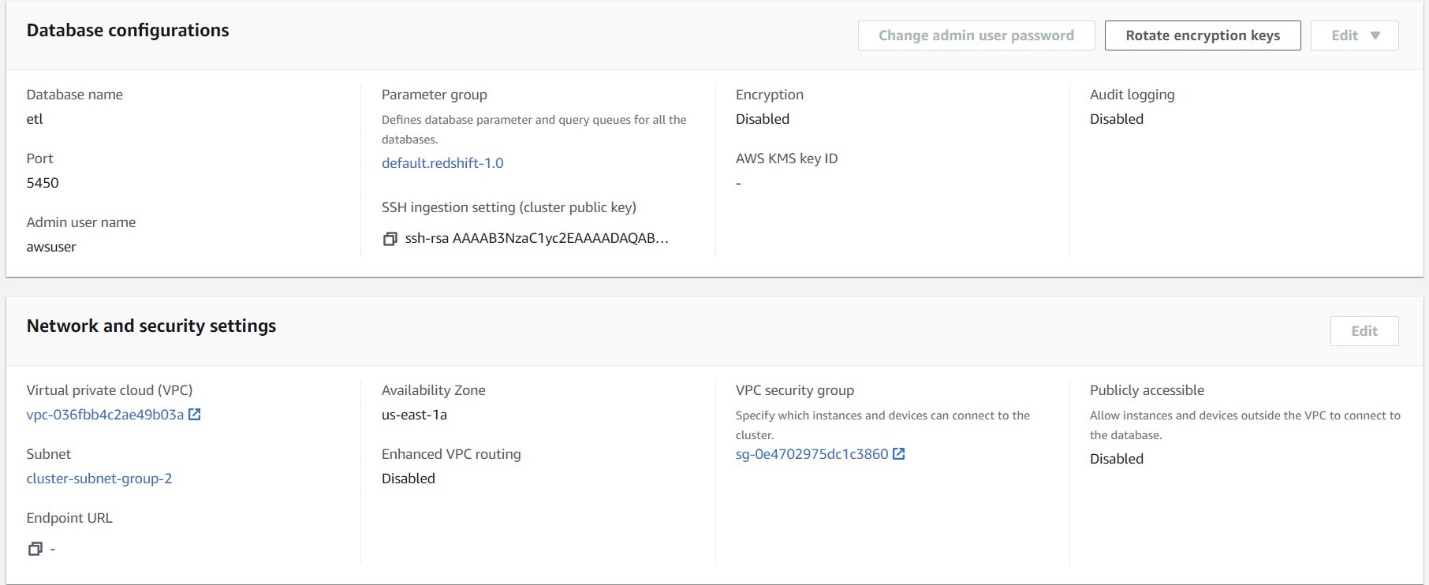
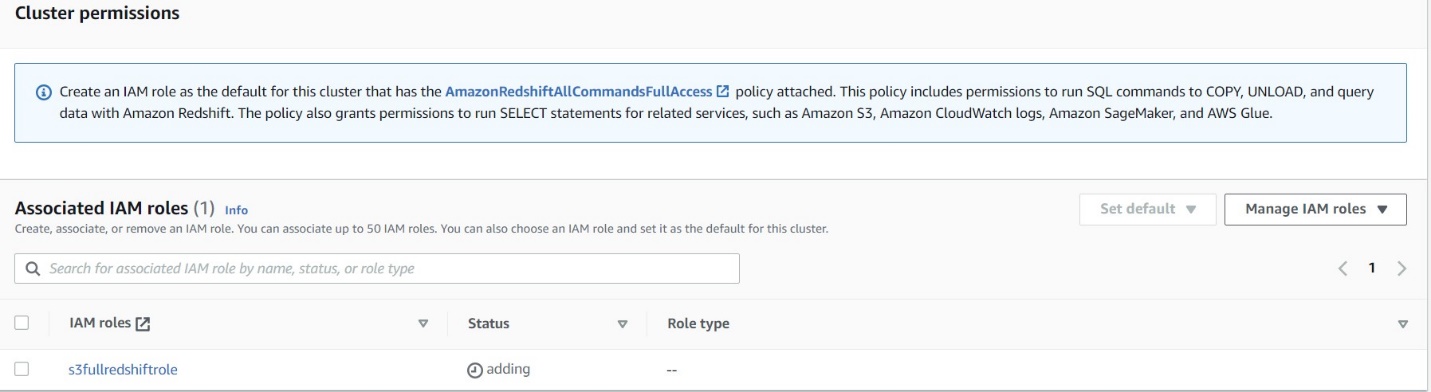
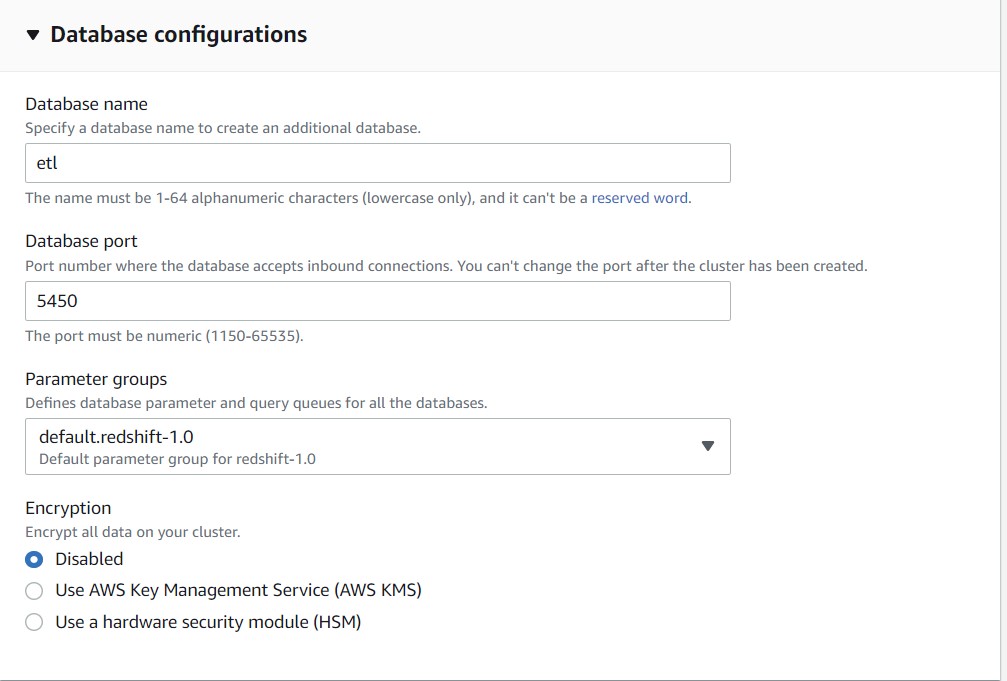
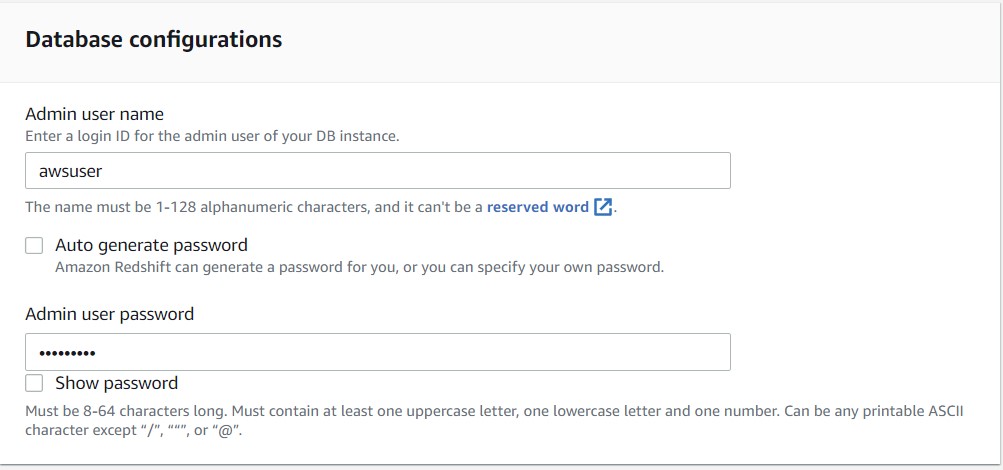
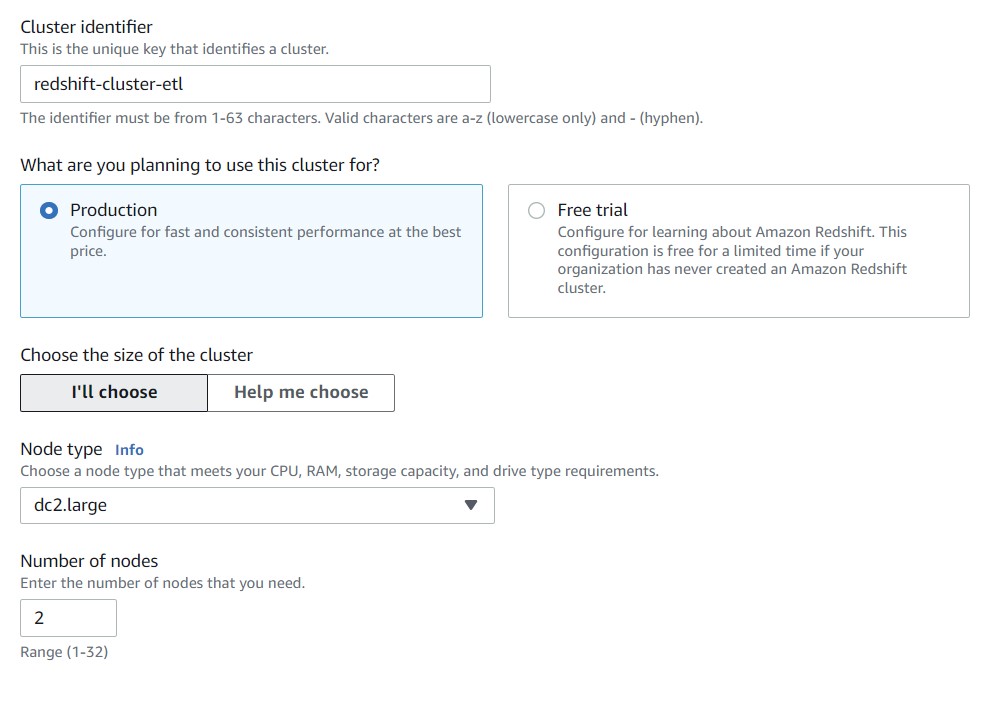
### Creation of a Redshift Cluster

**Screenshots of the configuration of the Redshift cluster that you have created:**



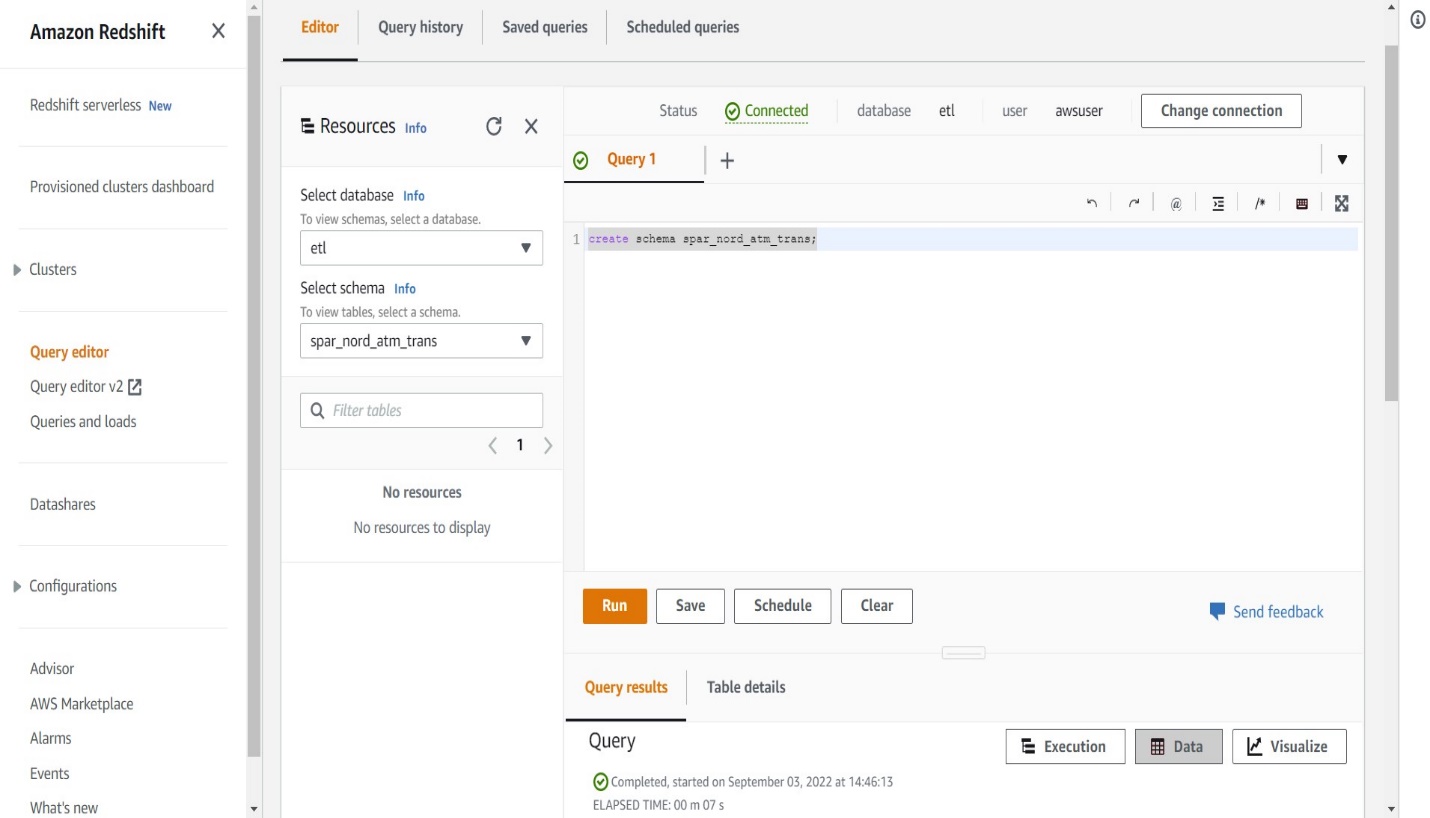
### 

### Setting up a database in the Redshift cluster and running queries to create the dimension and fact tables

**Queries to create the various dimension and fact tables with appropriate primary and foreign keys:**

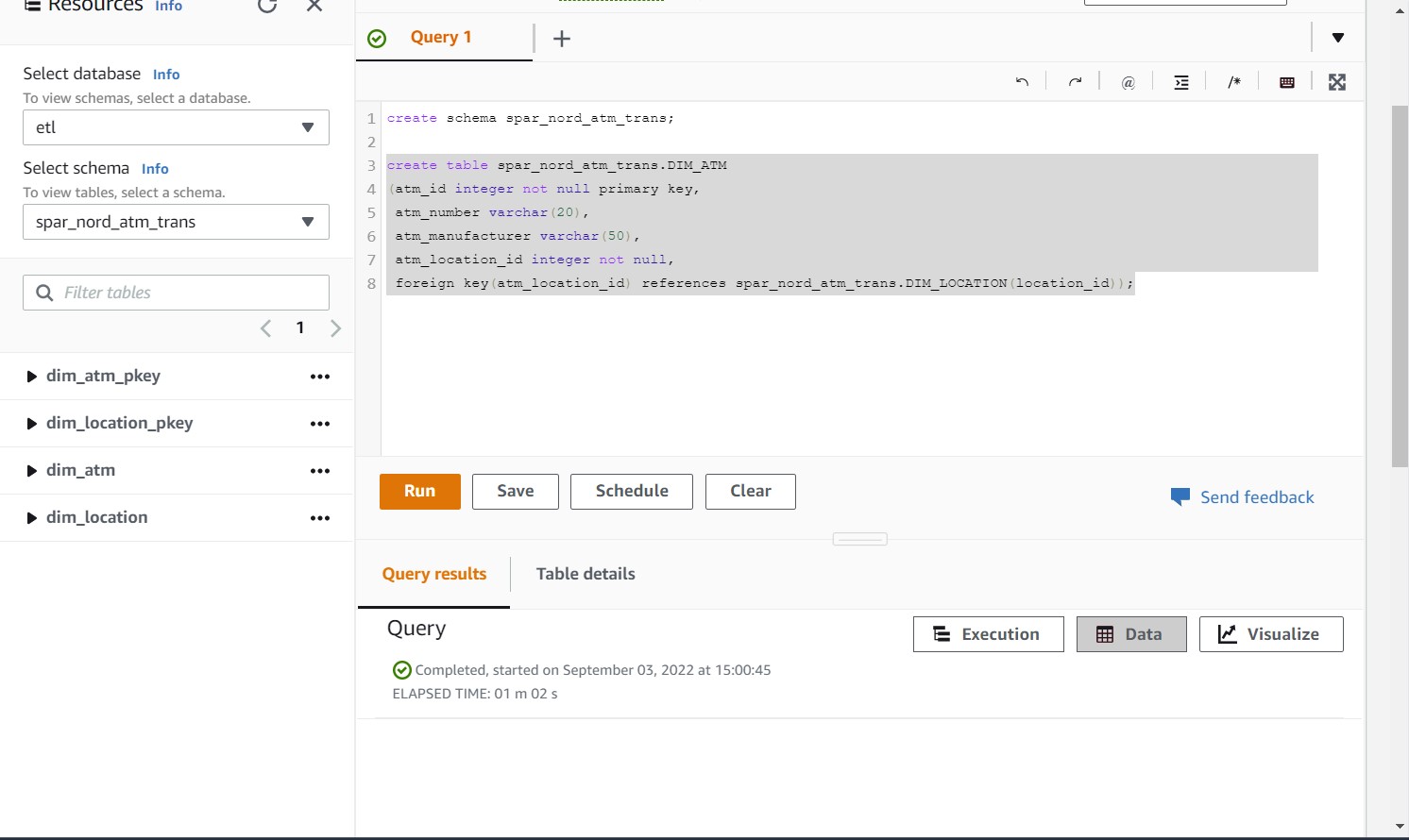
Schema Creation : SPAR\_NORD\_ATM\_TRANS

|  |
| --- |
| ***create schema spar\_nord\_atm\_trans;*** |

****

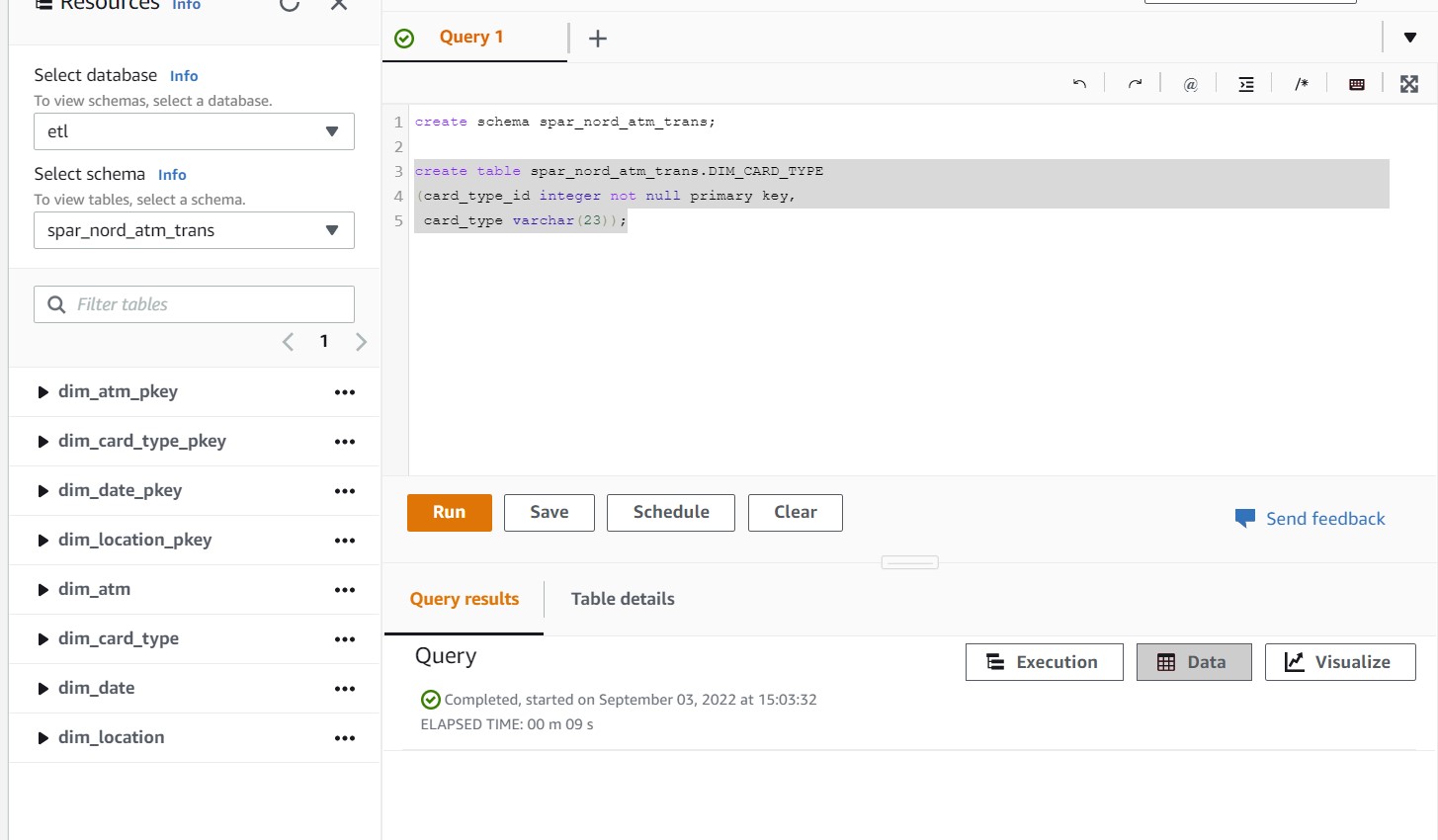
DIMENSION TABLE 1: DIM\_ATM

|  |
| --- |
| ***create table spar\_nord\_atm\_trans.DIM\_ATM***  ***(atm\_id integer not null primary key,***  ***atm\_number varchar(20),***  ***atm\_manufacturer varchar(50),***  ***atm\_location\_id integer not null,***  ***foreign key(atm\_location\_id) references spar\_nord\_atm\_trans.DIM\_LOCATION(location\_id));*** |

****

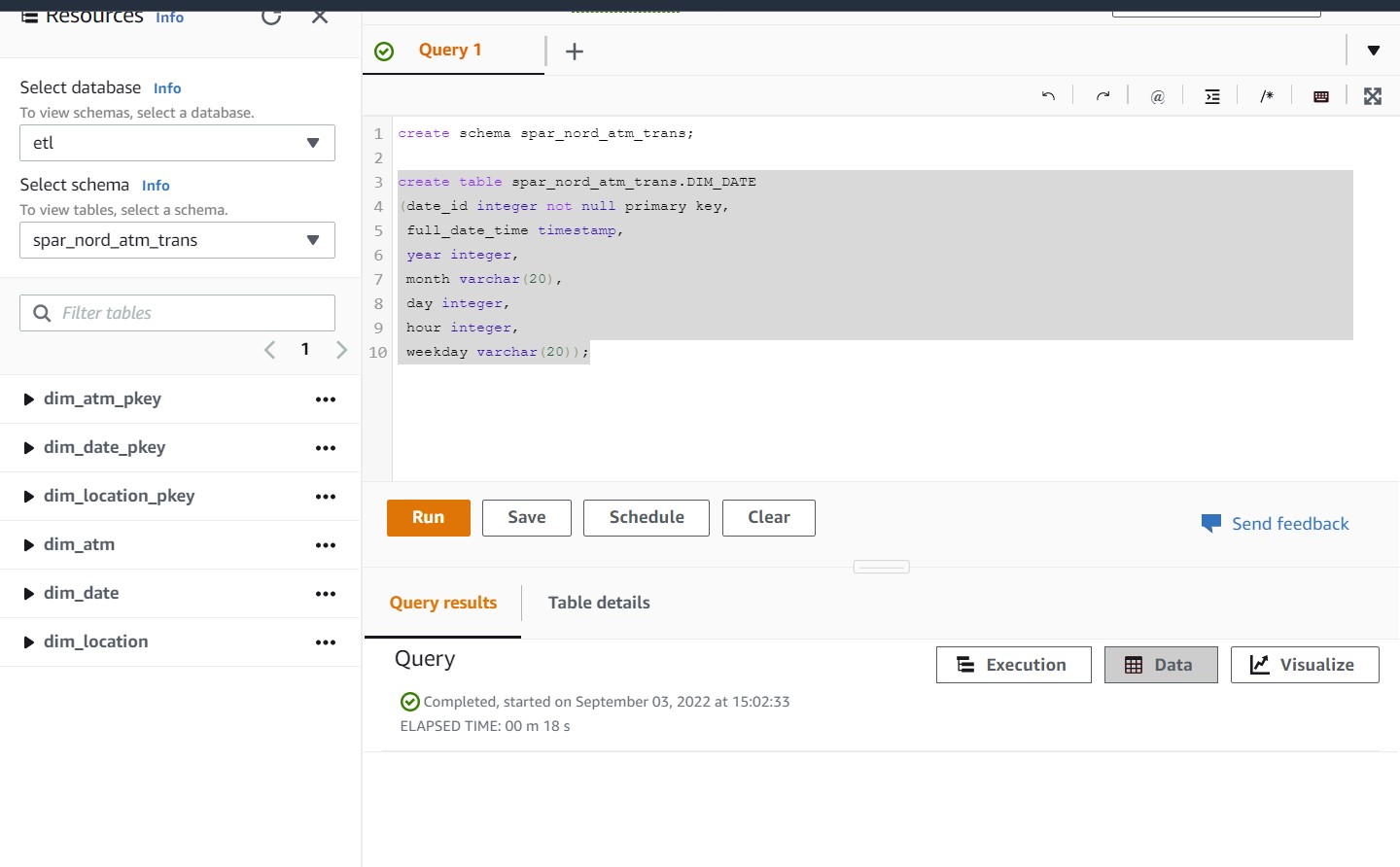
DIMENSION TABLE 2: DIM\_CARD\_TYPE

|  |
| --- |
| ***create table spar\_nord\_atm\_trans.DIM\_CARD\_TYPE***  ***(card\_type\_id integer not null primary key,***  ***card\_type varchar(23));*** |

****

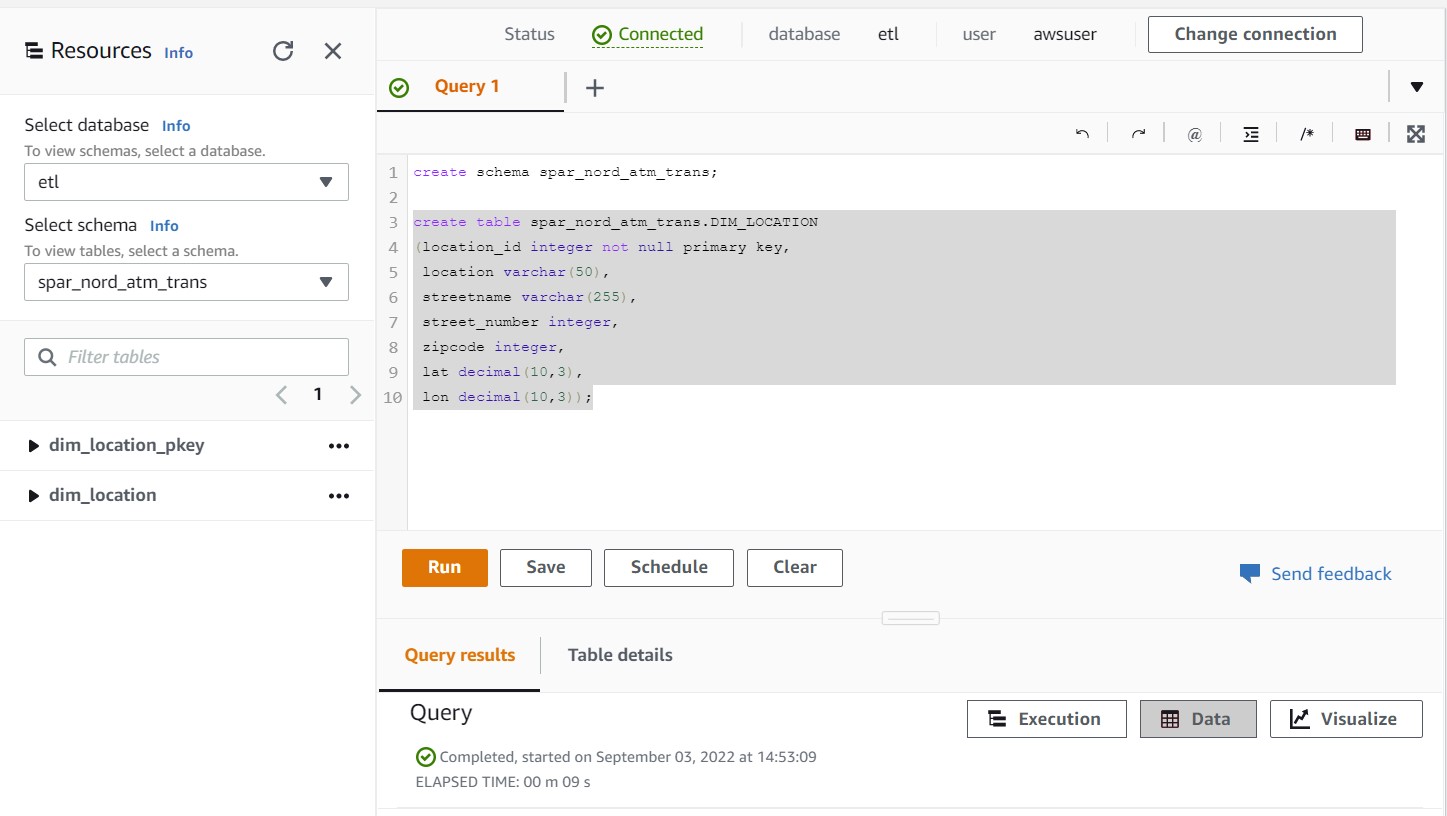
DIMENSION TABLE 3: DIM\_DATE

|  |
| --- |
| ***create table spar\_nord\_atm\_trans.DIM\_DATE***  ***(date\_id integer not null primary key,***  ***full\_date\_time timestamp,***  ***year integer,***  ***month varchar(20),***  ***day integer,***  ***hour integer,***  ***weekday varchar(20));*** |

****

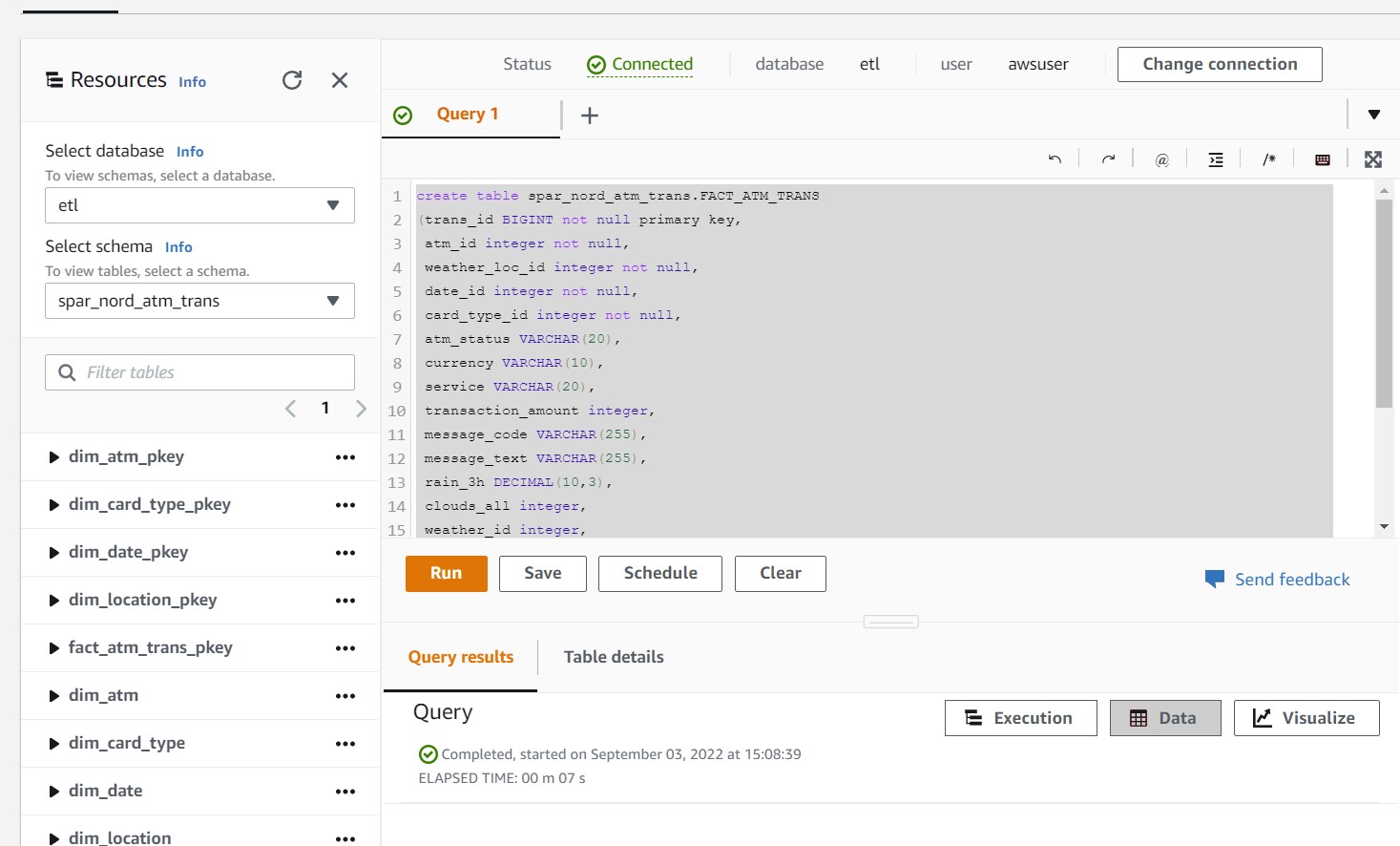
DIMENSION TABLE 4: DIM\_LOCATION

|  |
| --- |
| ***create table spar\_nord\_atm\_trans.DIM\_LOCATION***  ***(location\_id integer not null primary key,***  ***location varchar(50),***  ***streetname varchar(255),***  ***street\_number integer,***  ***zipcode integer,***  ***lat decimal(10,3),***  ***lon decimal(10,3));*** |

****

FACT TABLE : FACT\_ATM\_TRANS

|  |
| --- |
| ***create table spar\_nord\_atm\_trans.FACT\_ATM\_TRANS***  ***(trans\_id bigint not null DISTKEY SORTKEY,***  ***atm\_id int,***  ***weather\_loc\_id int,***  ***date\_id int,***  ***card\_type\_id int,***  ***atm\_status varchar(20),***  ***currency varchar(10),***  ***service varchar(20),***  ***transaction\_amount int,***  ***message\_code varchar(225),***  ***message\_text varchar(225),***  ***rain\_3h decimal(10,3),***  ***clouds\_all int,***  ***weather\_id int,***  ***weather\_main varchar(50),***  ***weather\_description varchar(255),***  ***PRIMARY KEY(trans\_id),***  ***FOREIGN KEY(weather\_loc\_id) references spar\_nord\_atm\_trans.DIM\_LOCATION(location\_id),***  ***FOREIGN KEY(atm\_id) references spar\_nord\_atm\_trans.DIM\_ATM(atm\_id),***  ***FOREIGN KEY(date\_id) references spar\_nord\_atm\_trans.DIM\_DATE(date\_id),***  ***FOREIGN KEY(card\_type\_id) references spar\_nord\_atm\_trans.DIM\_CARD\_TYPE(card\_type\_id));*** |

****

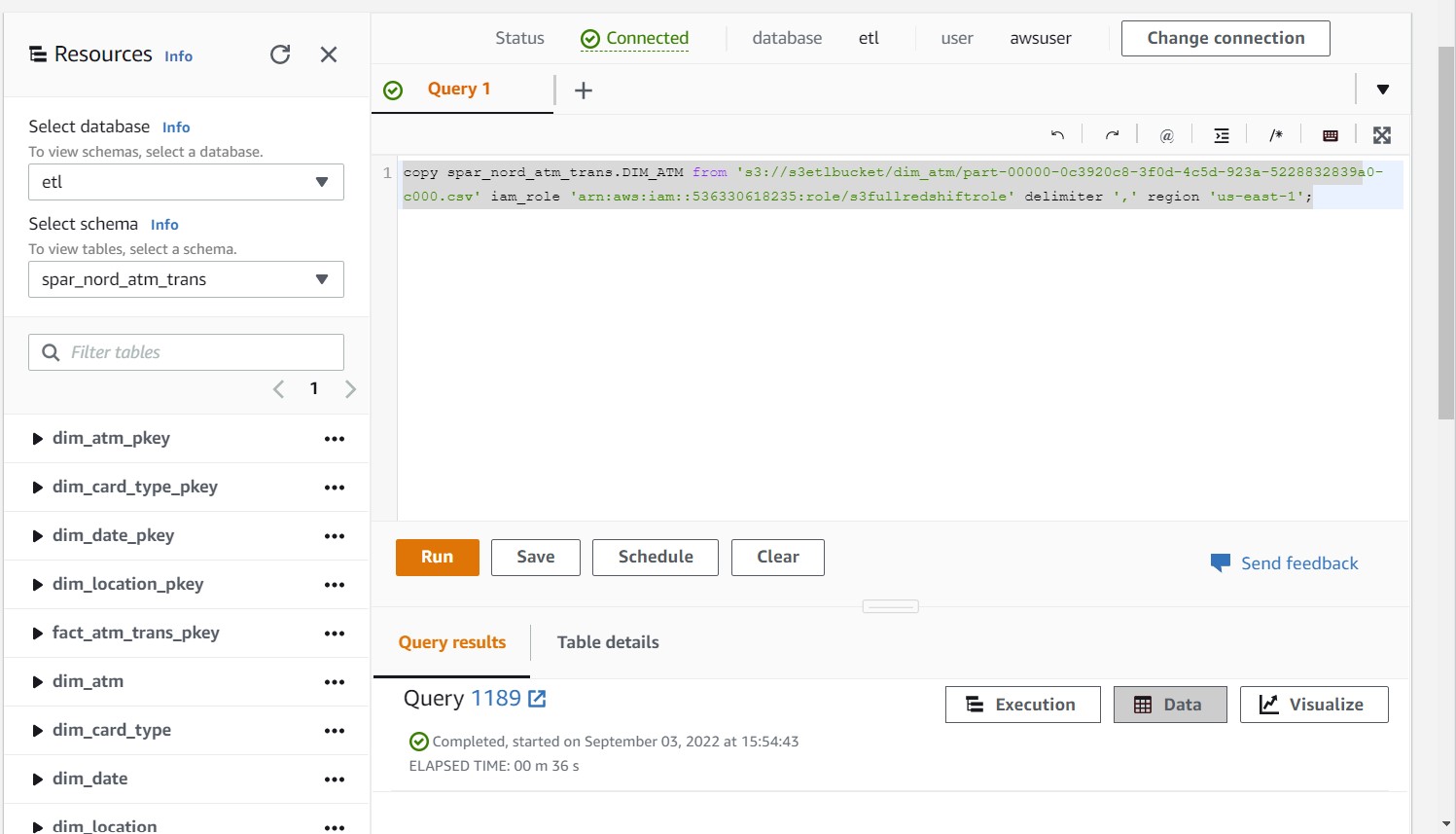
### 

### Loading data into a Redshift cluster from Amazon S3 bucket

**Queries to copy the data from S3 buckets to the Redshift cluster in the appropriate tables**

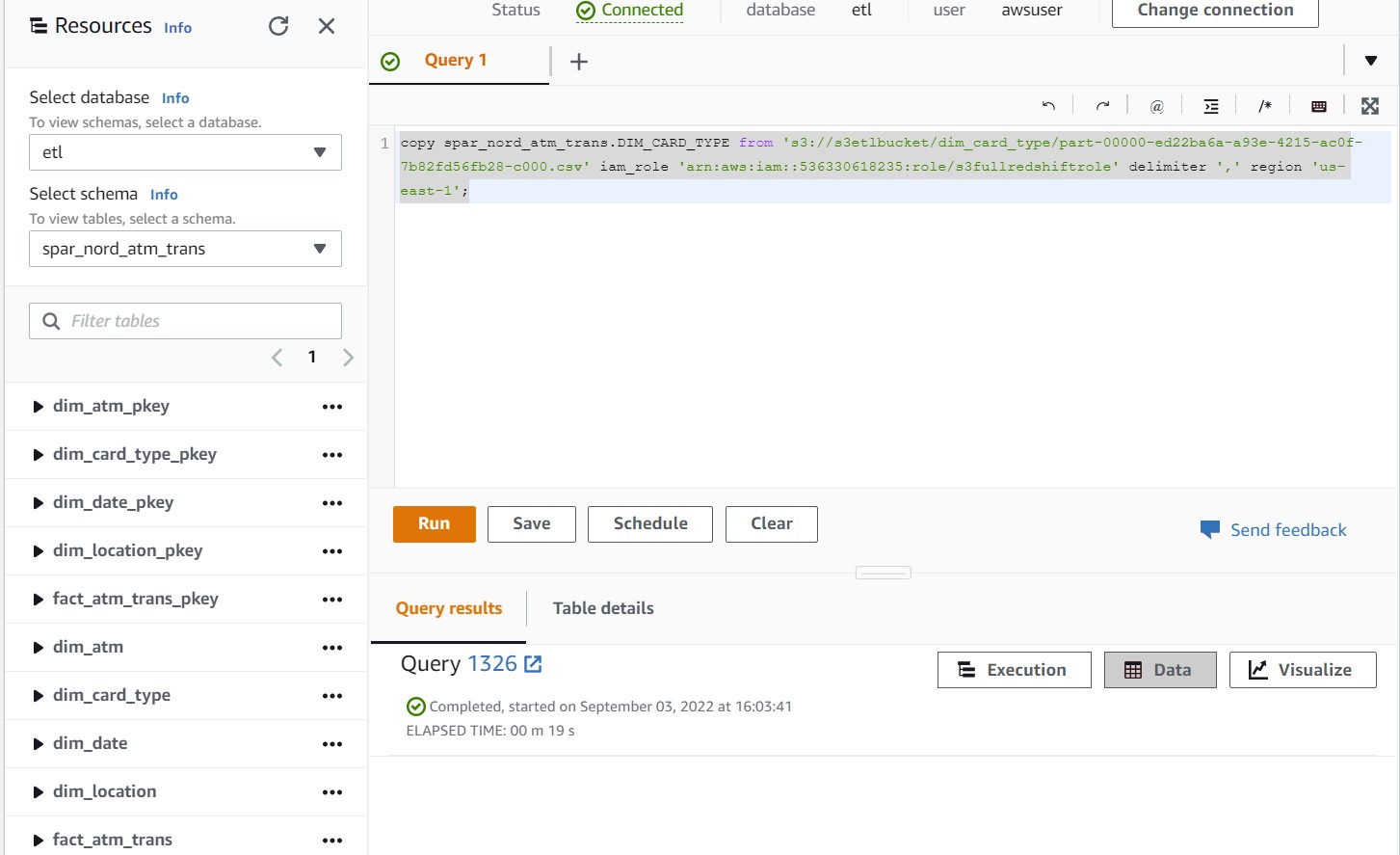
**S3 to Redshift DIM\_ATM**

|  |
| --- |
| ***copy spar\_nord\_atm\_trans.DIM\_ATM from 's3://s3etlbucket/dim\_atm/part-00000-f38f2738-f84e-4581-af21-6eaebeedef11-c000.csv' iam\_role 'arn:aws:iam::536330618235:role/s3fullredshiftrole' delimiter ',' region 'us-east-1';*** |



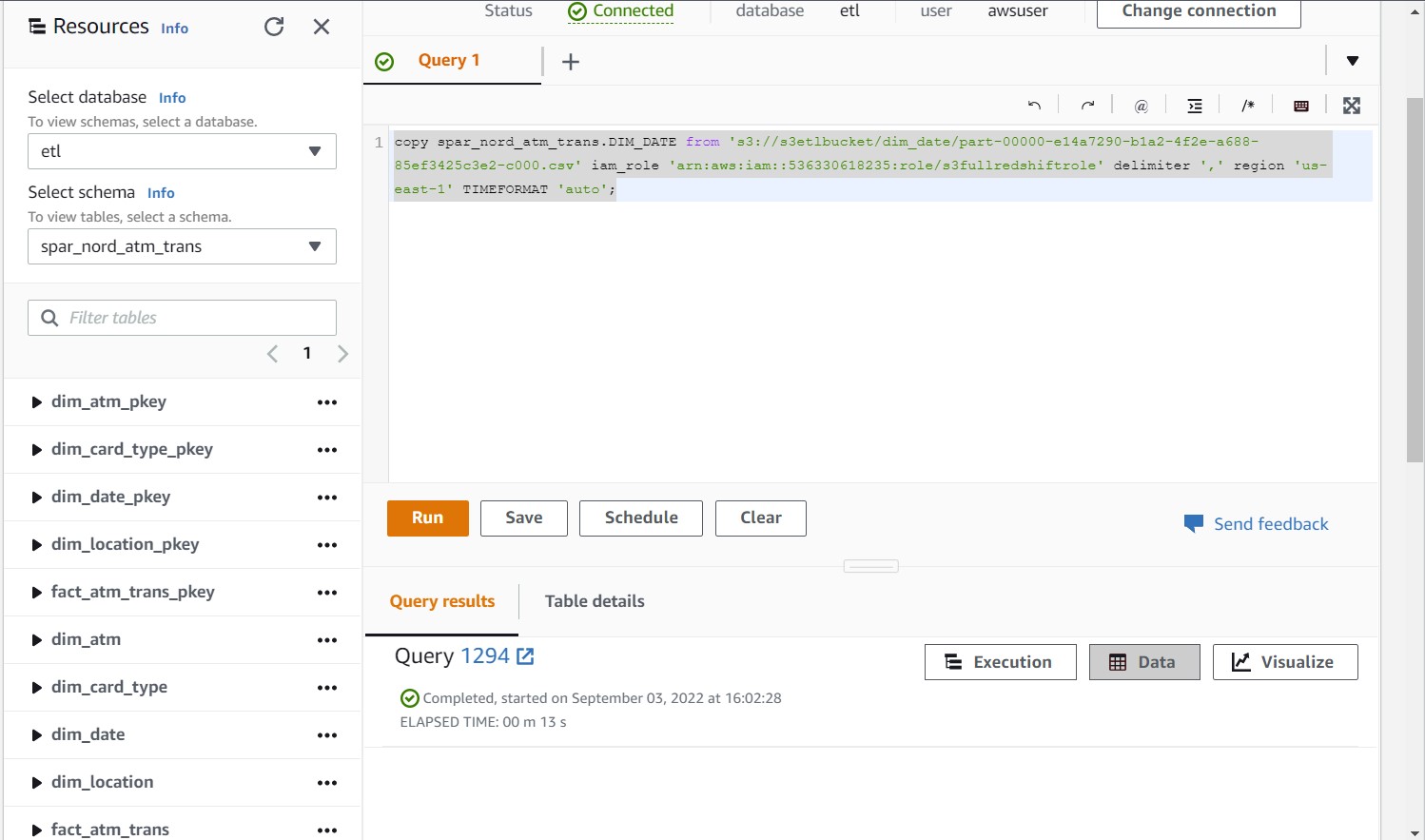
**S3 to Redshift DIM\_CARD\_TYPE**

|  |
| --- |
| ***copy spar\_nord\_atm\_trans.DIM\_CARD\_TYPE from 's3://s3etlbucket/dim\_card\_type/part-00000-e7170186-2eb6-4b2d-a1f0-f23527062a3b-c000.csv' iam\_role 'arn:aws:iam::536330618235:role/s3fullredshiftrole' delimiter ',' region 'us-east-1';*** |



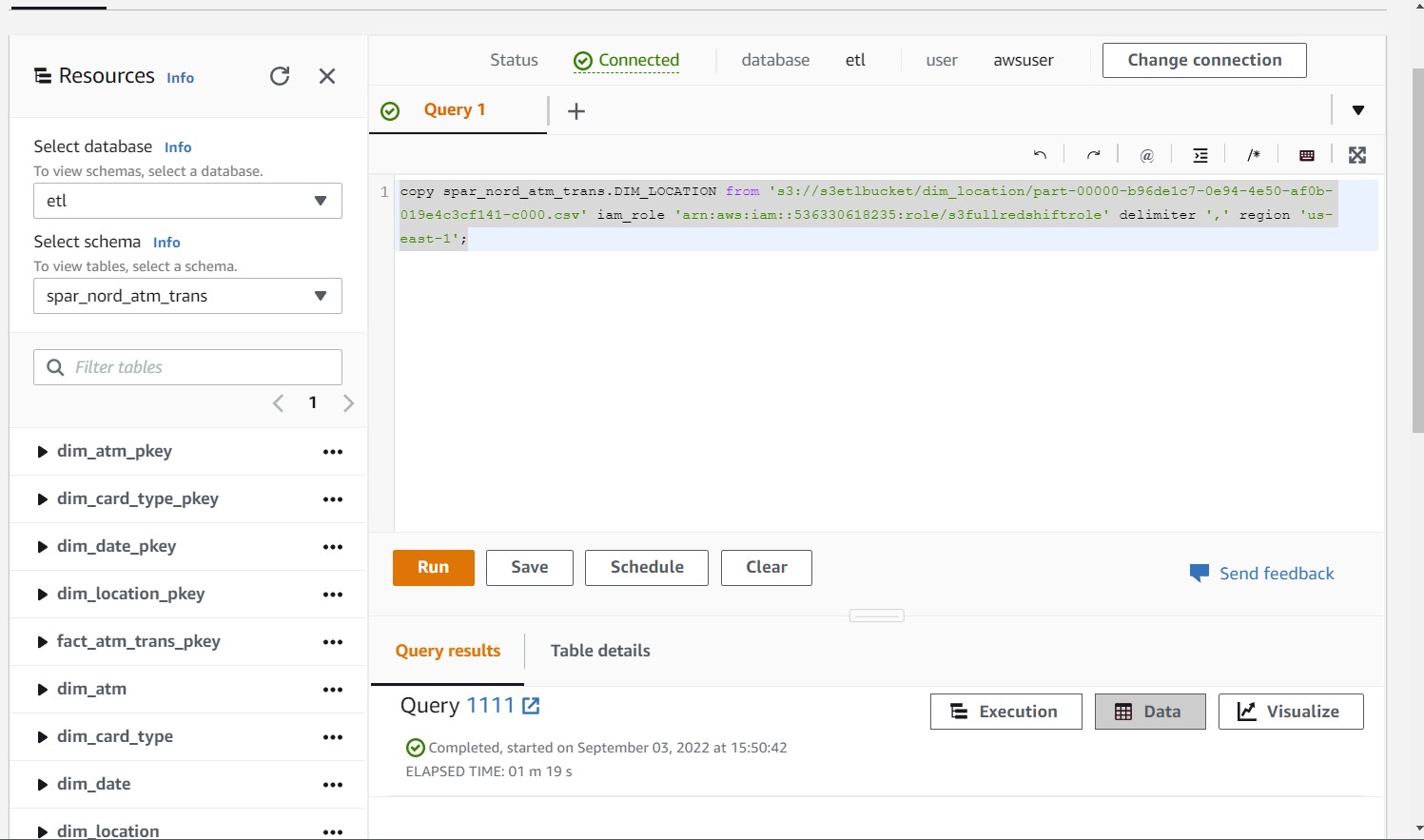
**S3 to Redshift DIM\_DATE**

|  |
| --- |
| ***copy spar\_nord\_atm\_trans.DIM\_DATE from 's3://s3etlbucket/dim\_date/part-00000-ace51bd0-f726-40e3-9a8f-3c9bfe6066de-c000.csv' iam\_role 'arn:aws:iam::536330618235:role/s3fullredshiftrole' delimiter ',' region 'us-east-1' TIMEFORMAT 'auto';*** |



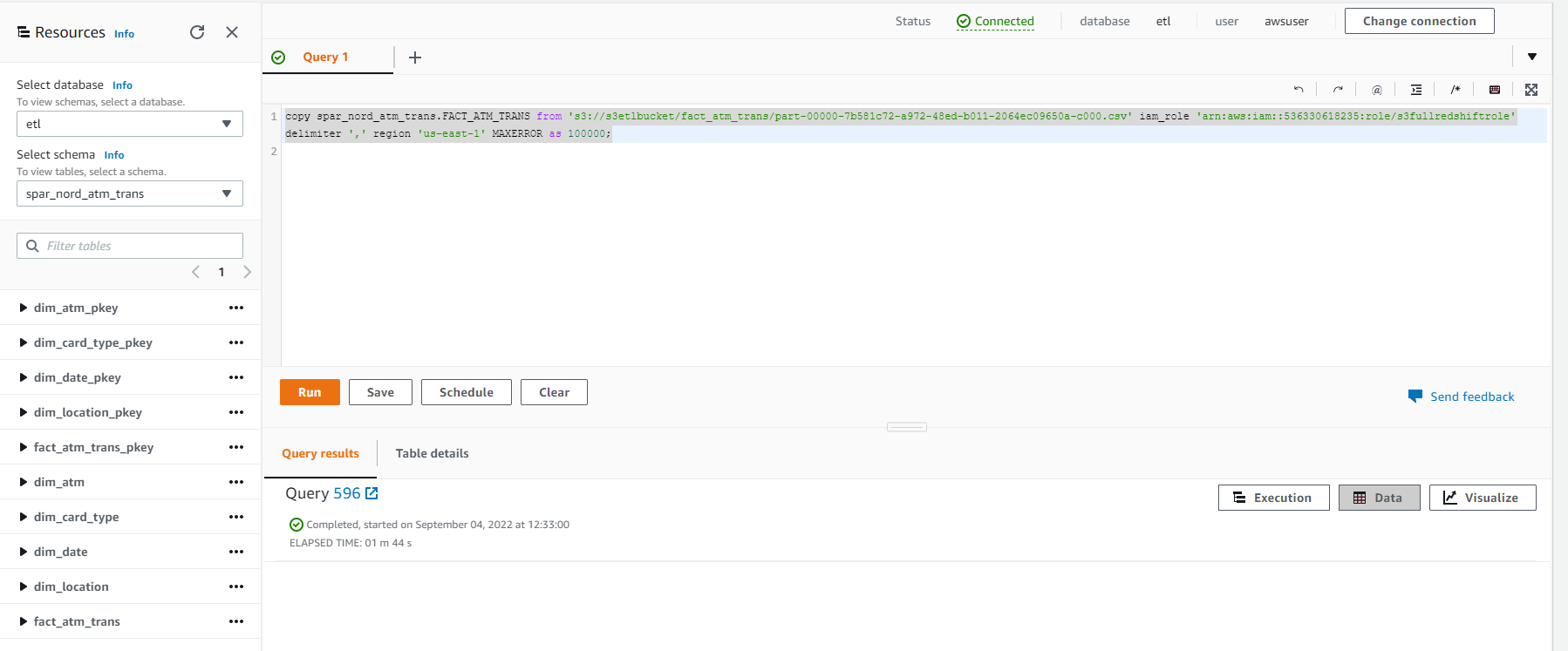
**S3 to Redshift DIM\_LOCATION**

|  |
| --- |
| ***copy spar\_nord\_atm\_trans.DIM\_LOCATION from 's3://s3etlbucket/dim\_location/part-00000-4083086e-aae6-44e1-833d-88b52c5f5f0d-c000.csv' iam\_role 'arn:aws:iam::536330618235:role/s3fullredshiftrole' delimiter ',' region 'us-east-1';*** |



**S3 to Redshift FACT\_ATM\_TRANS**

|  |
| --- |
| ***copy spar\_nord\_atm\_trans.FACT\_ATM\_TRANS from 's3://s3etlbucket/fact\_atm\_trans/part-00000-6d0fcdcf-adb2-4e08-bfd6-e24254fc7d11-c000.csv' iam\_role 'arn:aws:iam::536330618235:role/s3fullredshiftrole' delimiter ',' region 'us-east-1' CSV;*** |

****