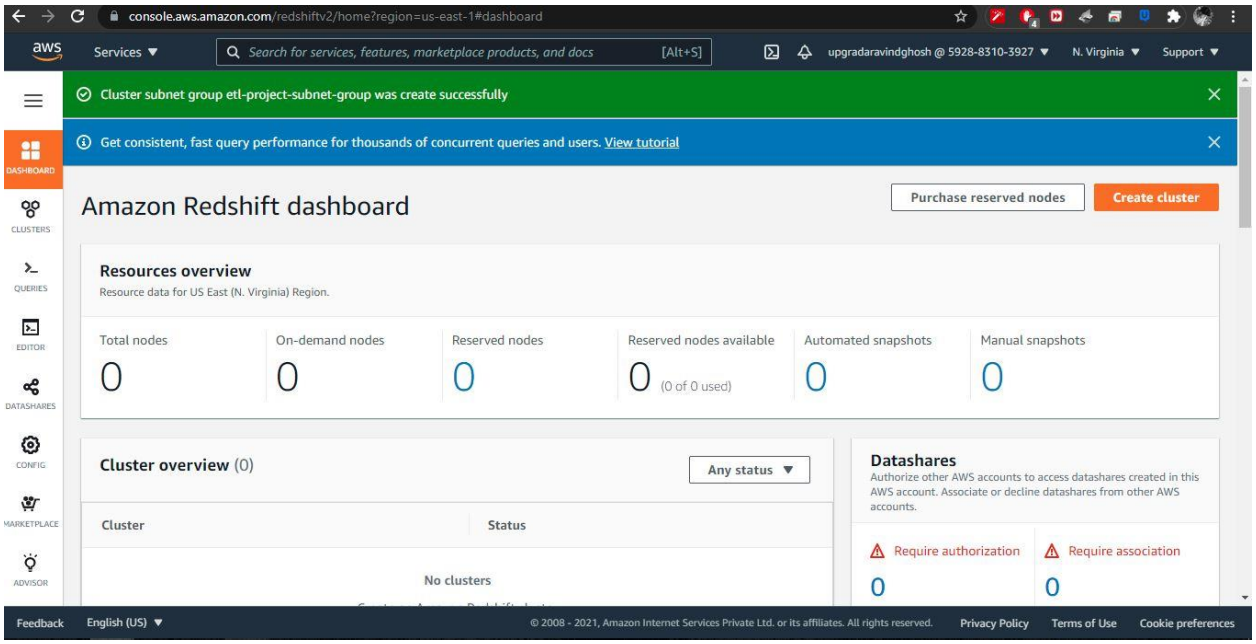
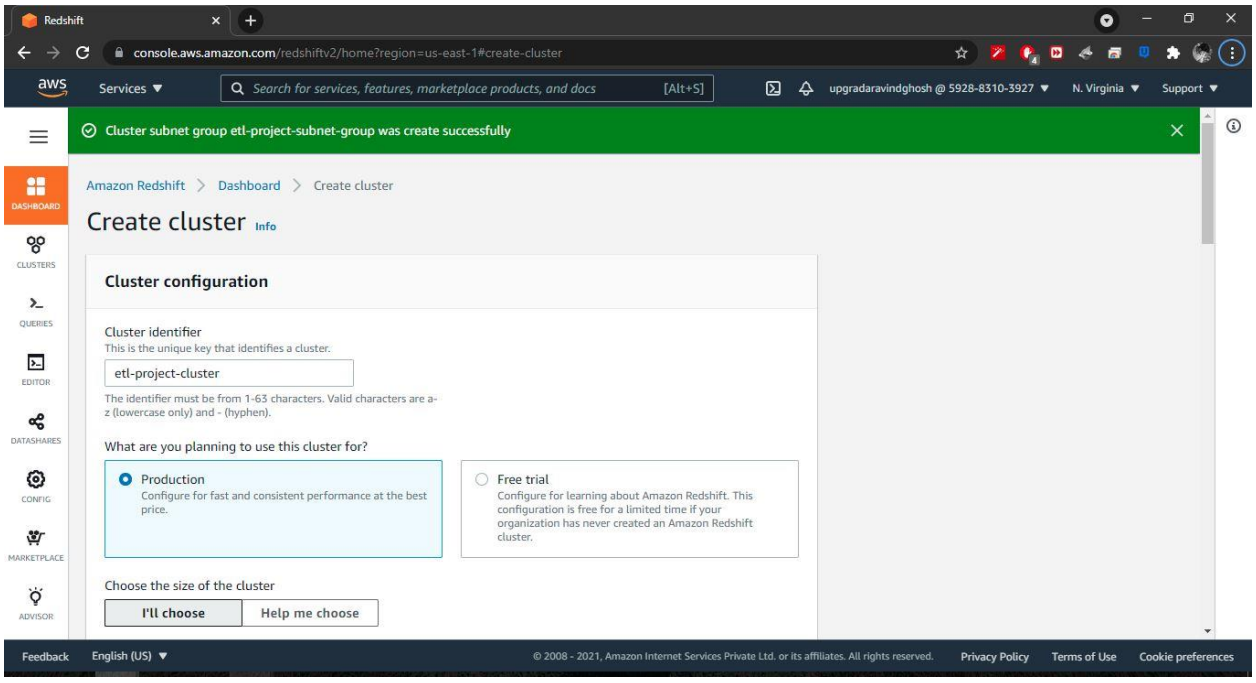
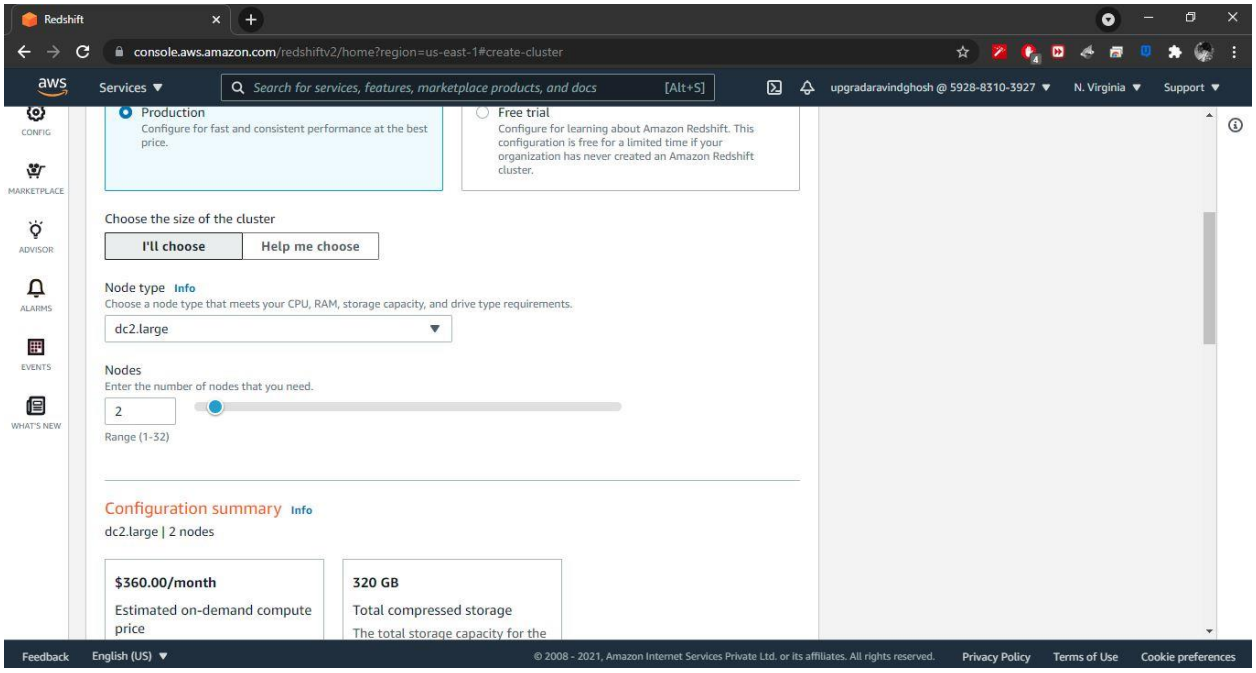
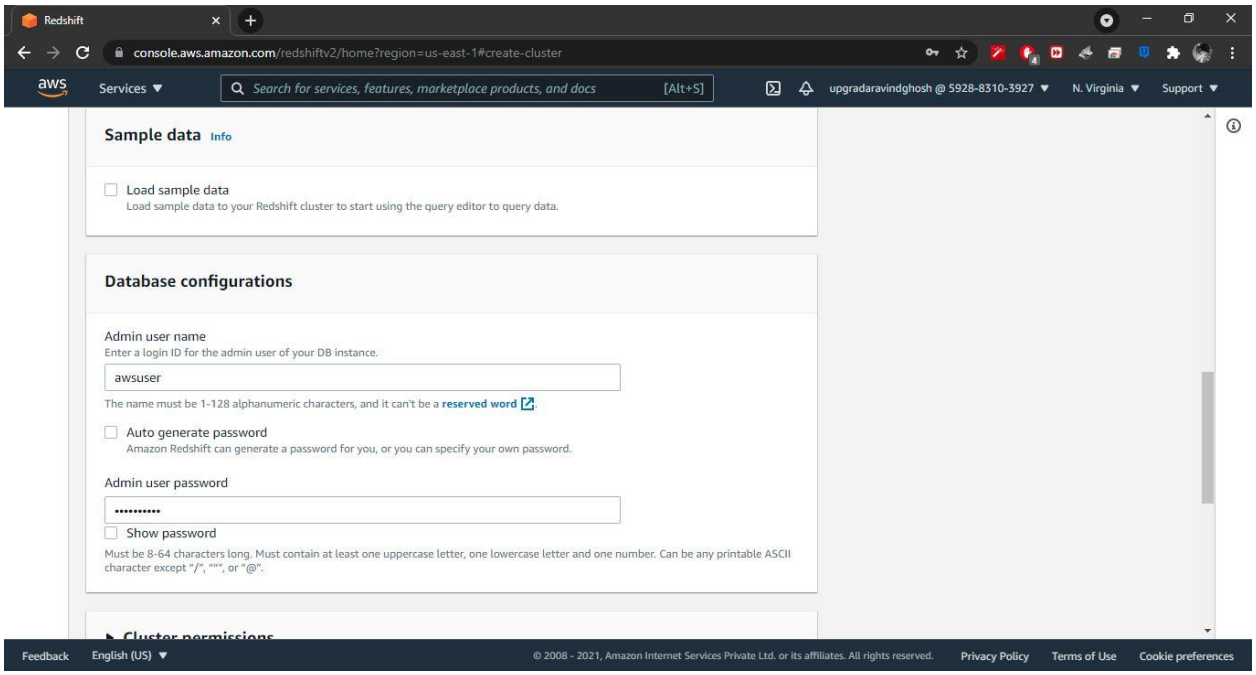
Creation of a RedShift Cluster

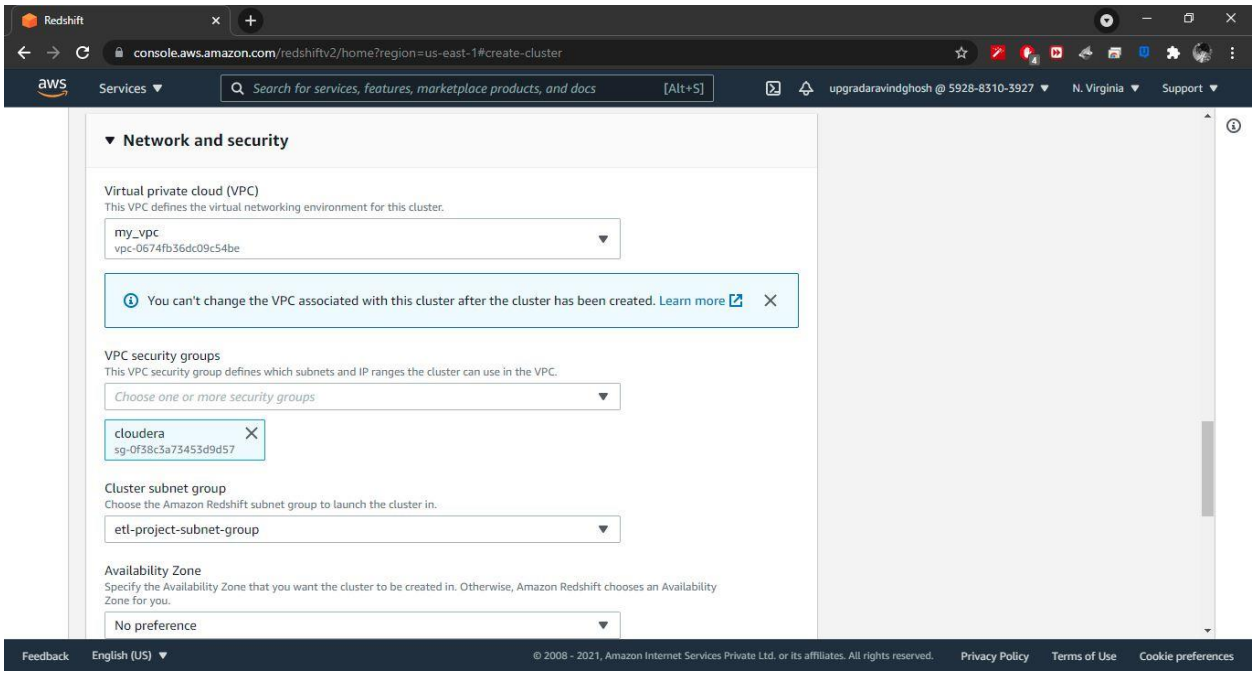
Screenshots of the configuration of the RedShift cluster that you have created:

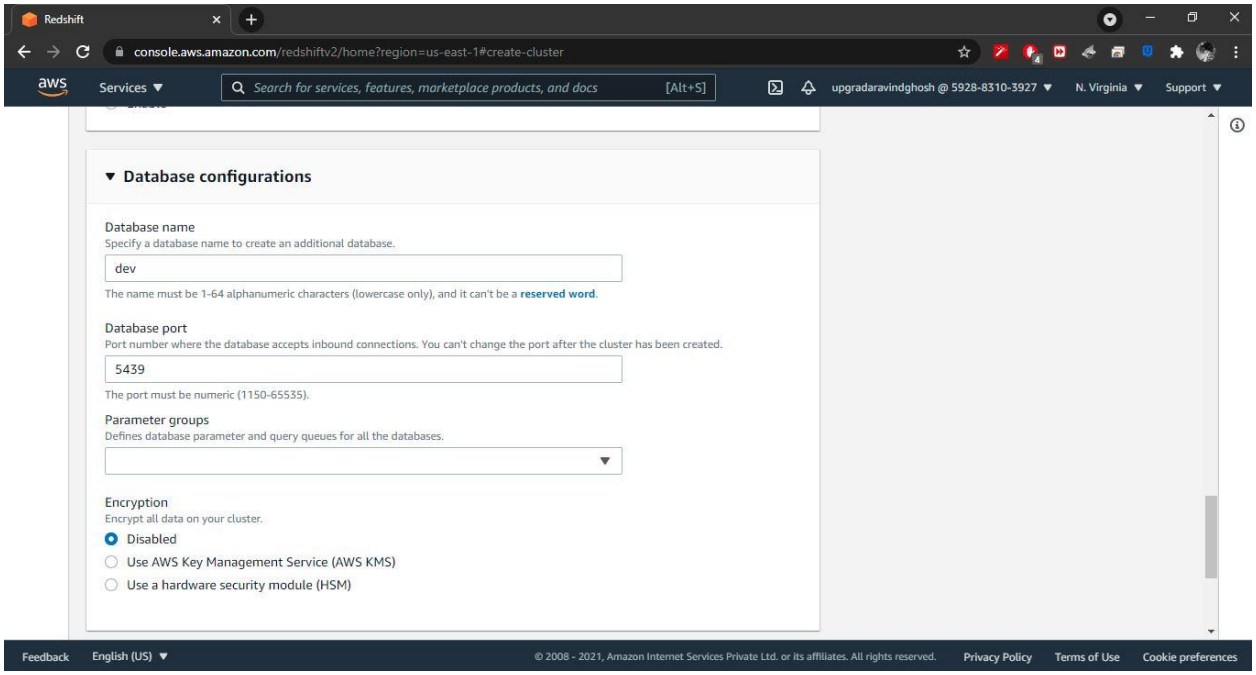


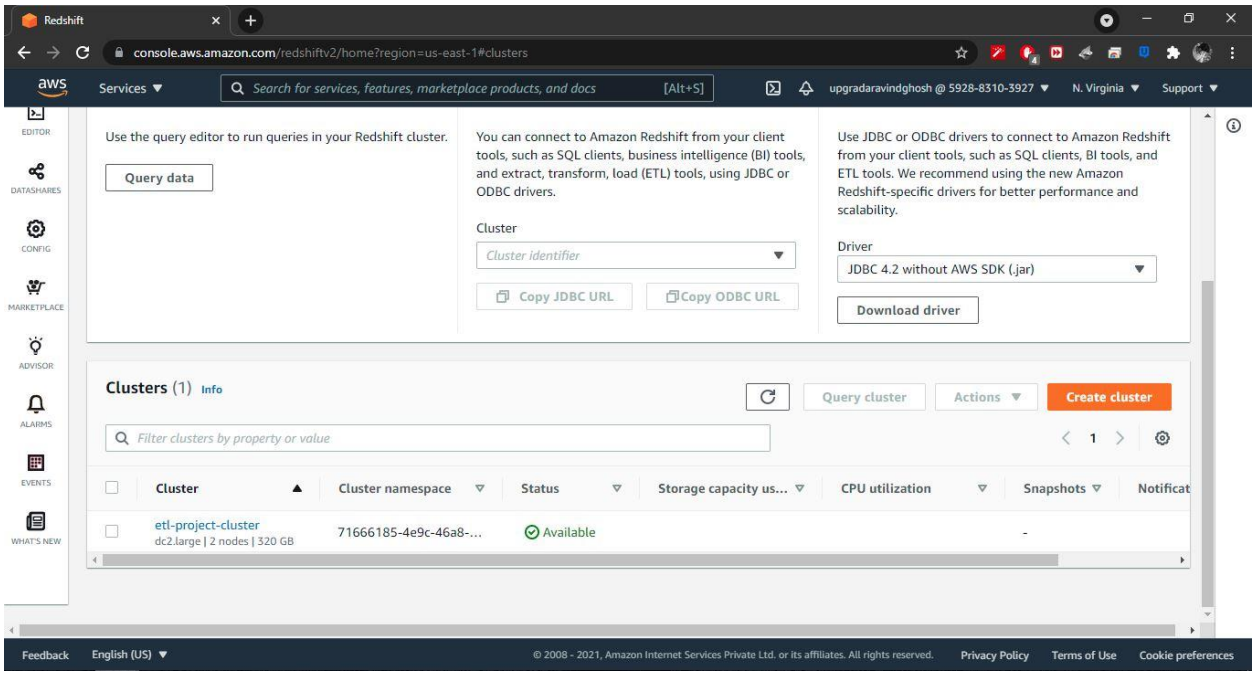




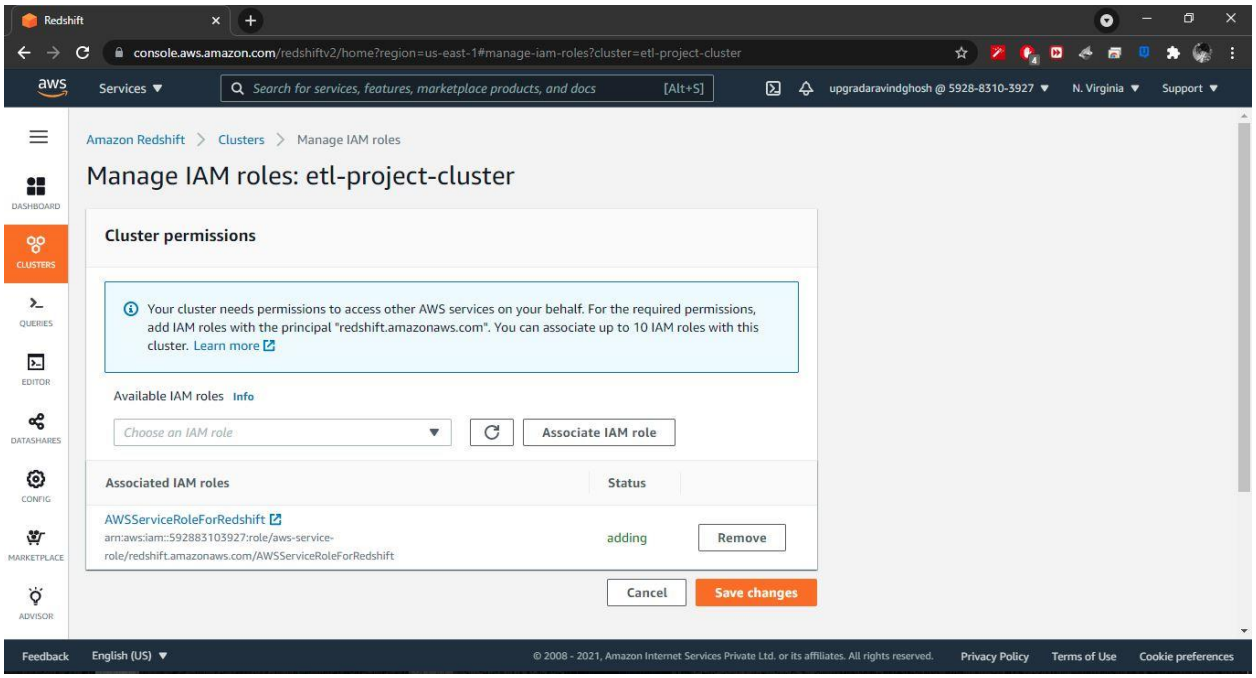


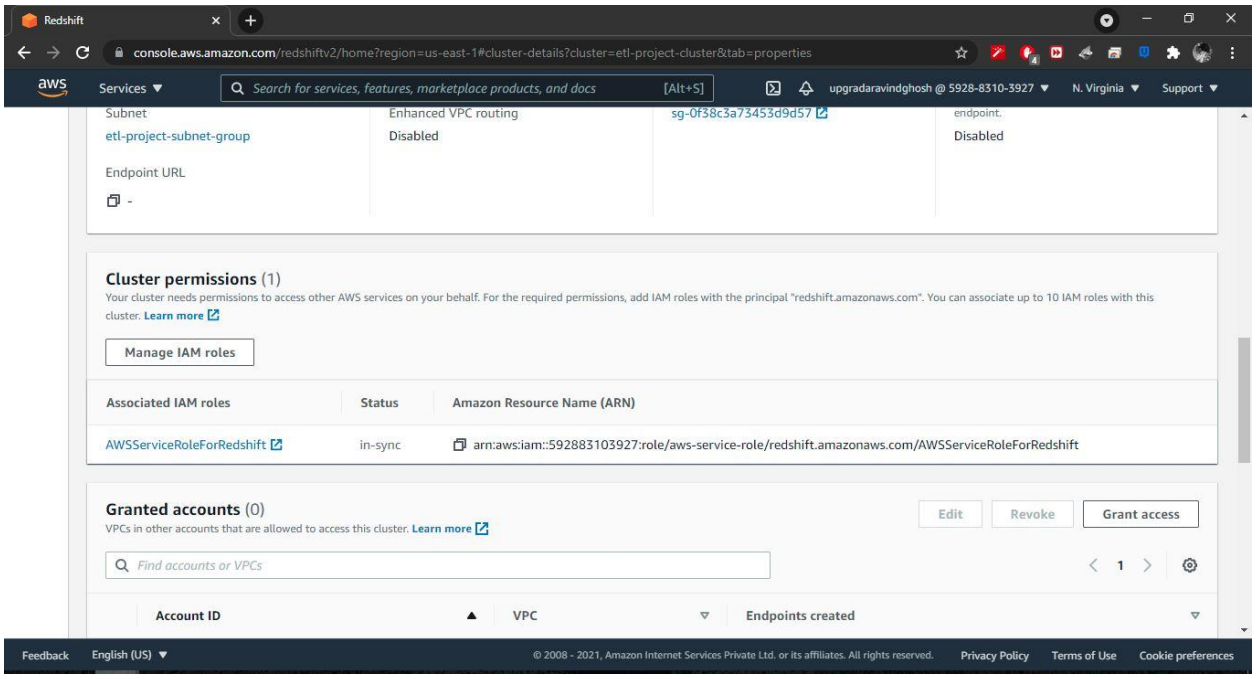






Attaching IAM Roles:

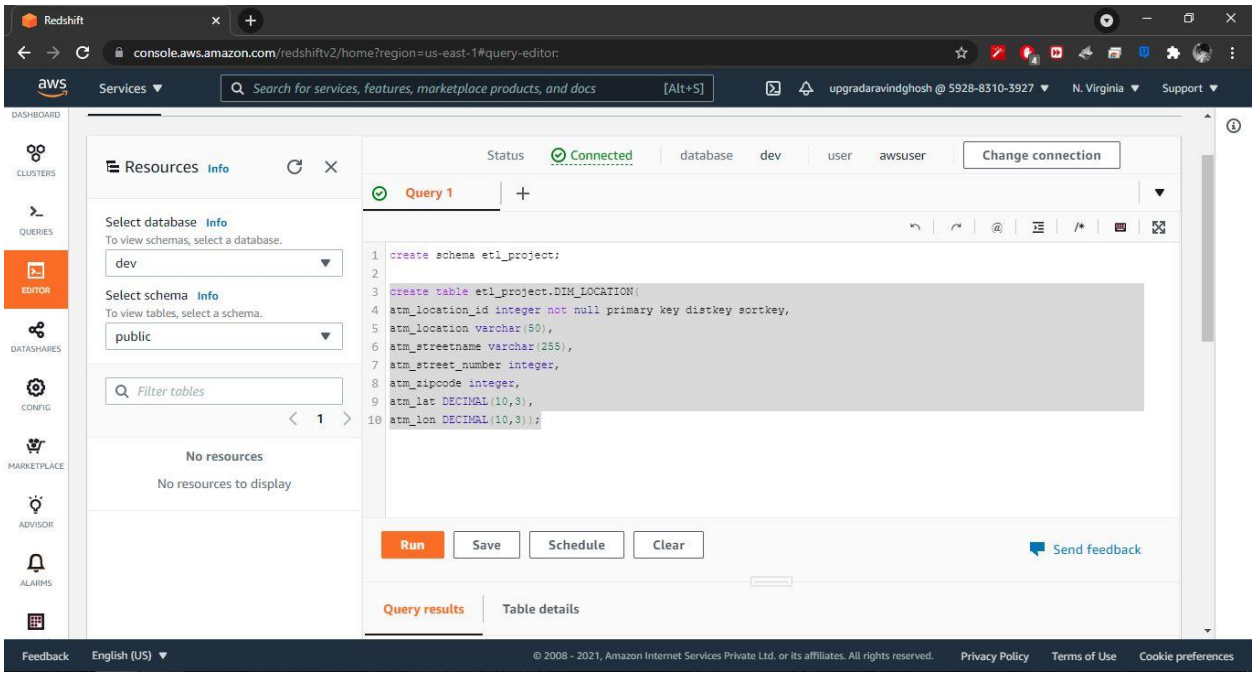




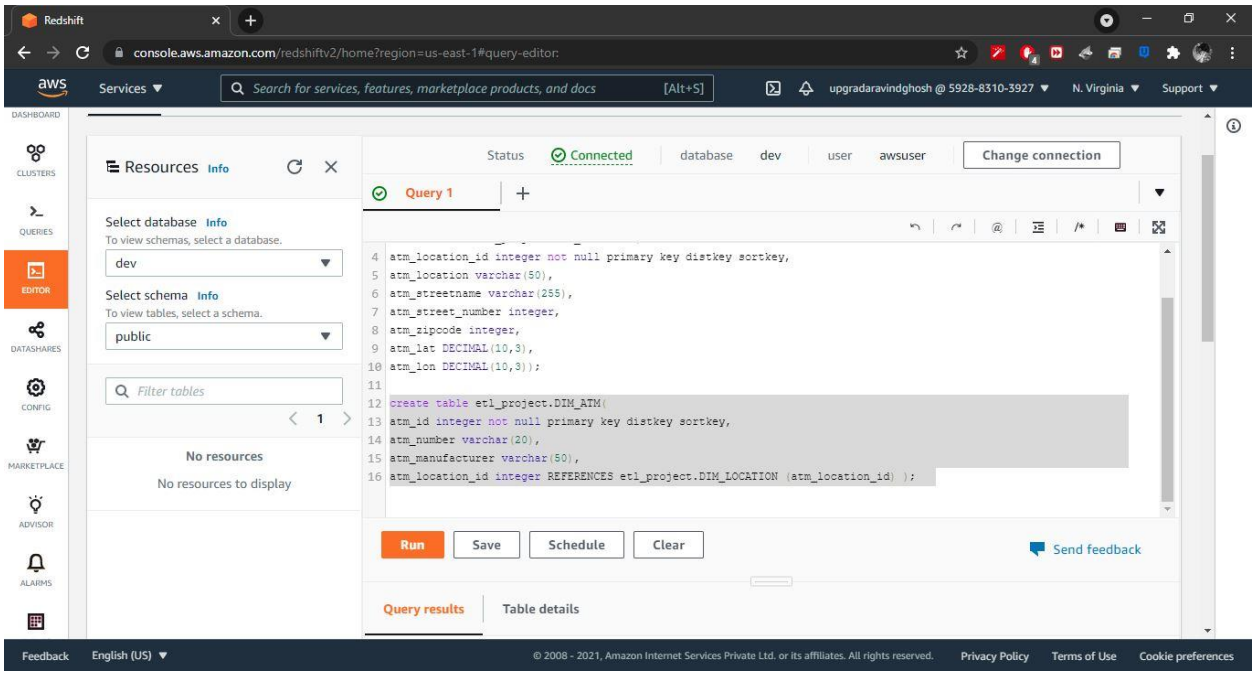
Setting up a database in the RedShift cluster and running queries to create the dimension and fact tables

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

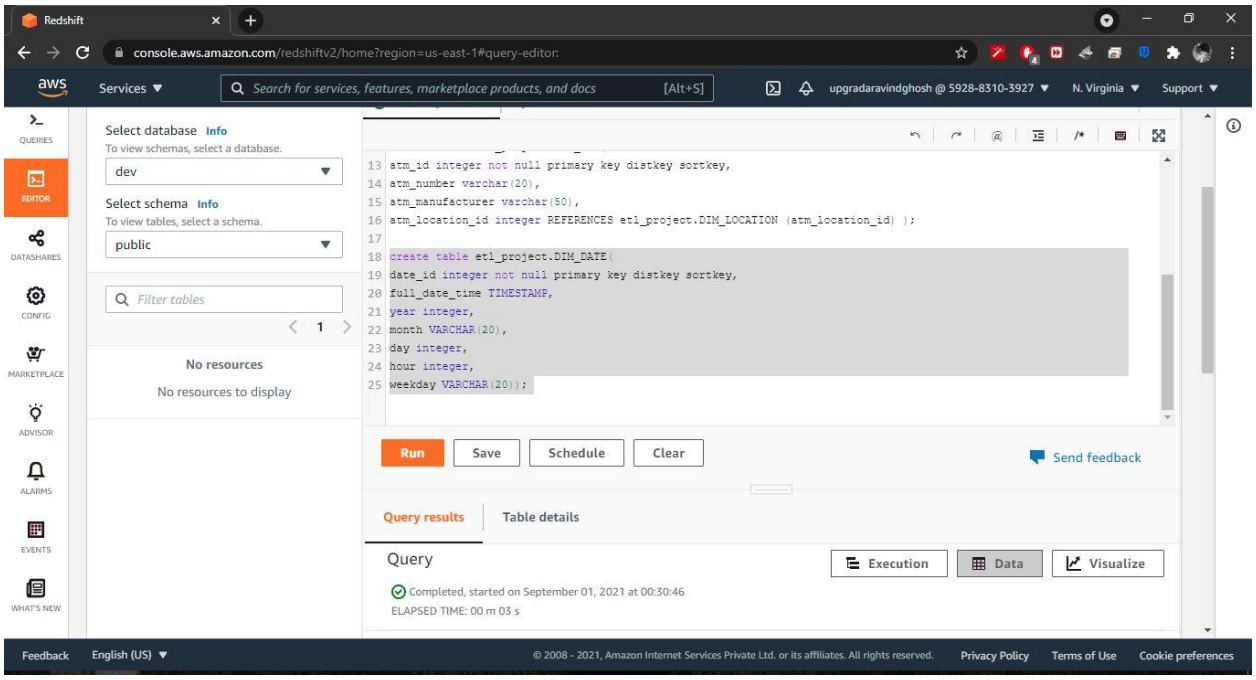
```
create schema etl_project;

create table etl_project.DIM_LOCATION(
atm_location_id integer not null primary key distkey sortkey,
atm_location varchar(50),
atm_streetname varchar(255),
atm_street_number integer,
atm_zipcode integer,
atm_lat DECIMAL(10,3),
atm_lon DECIMAL(10,3));
```



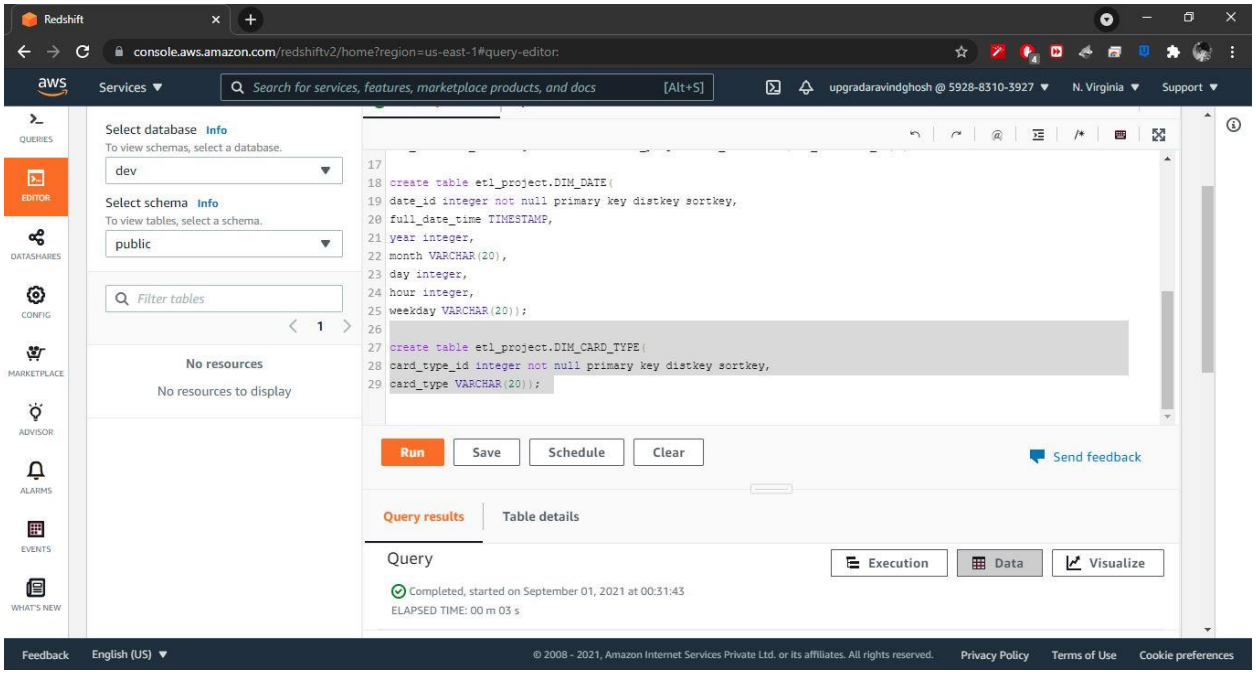
```
create table etl_project.DIM_ATM(
atm_id integer not null primary key distkey sortkey,
atm_number varchar(20),
atm_manufacturer varchar(50),
atm_location_id integer REFERENCES etl_project.DIM_LOCATION (atm_location_id) );
```



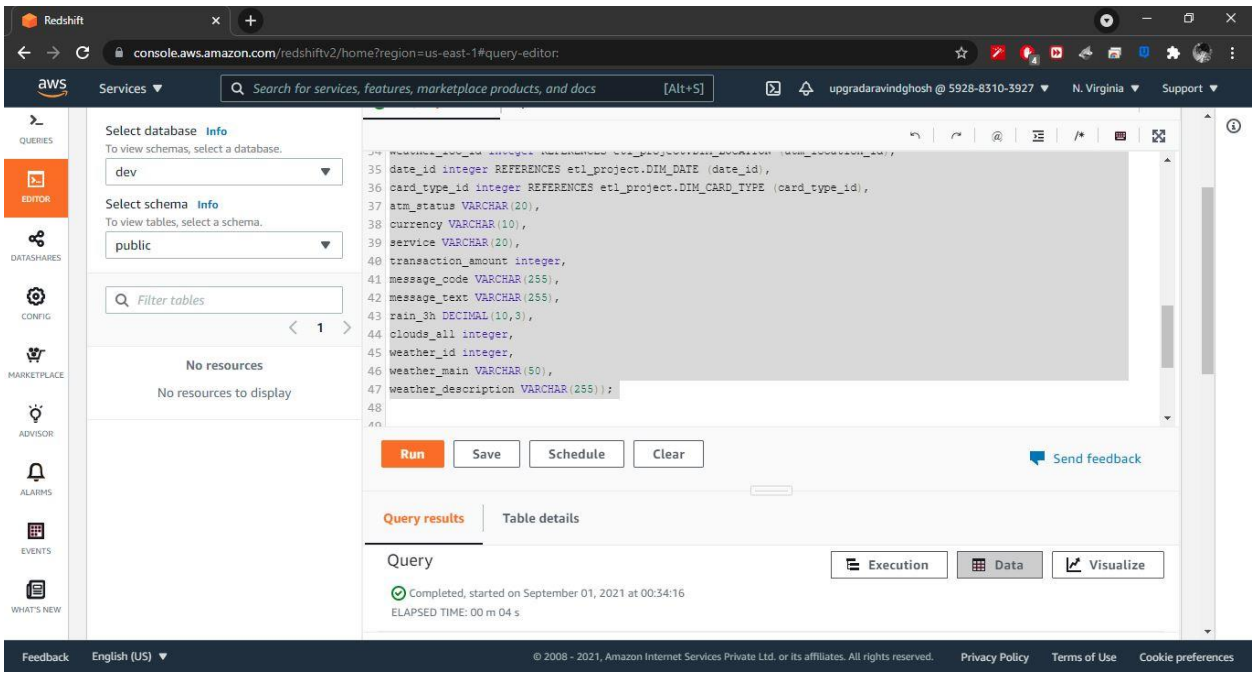
```
create table etl_project.DIM_DATE(
date_id integer not null primary key distkey sortkey,
full_date_time TIMESTAMP,
year integer,
month VARCHAR(20),
day integer,
hour integer,
weekday VARCHAR(20));
```



create table etl_project.DIM_CARD_TYPE(
card_type_id integer not null primary key distkey sortkey,
card_type VARCHAR(20));



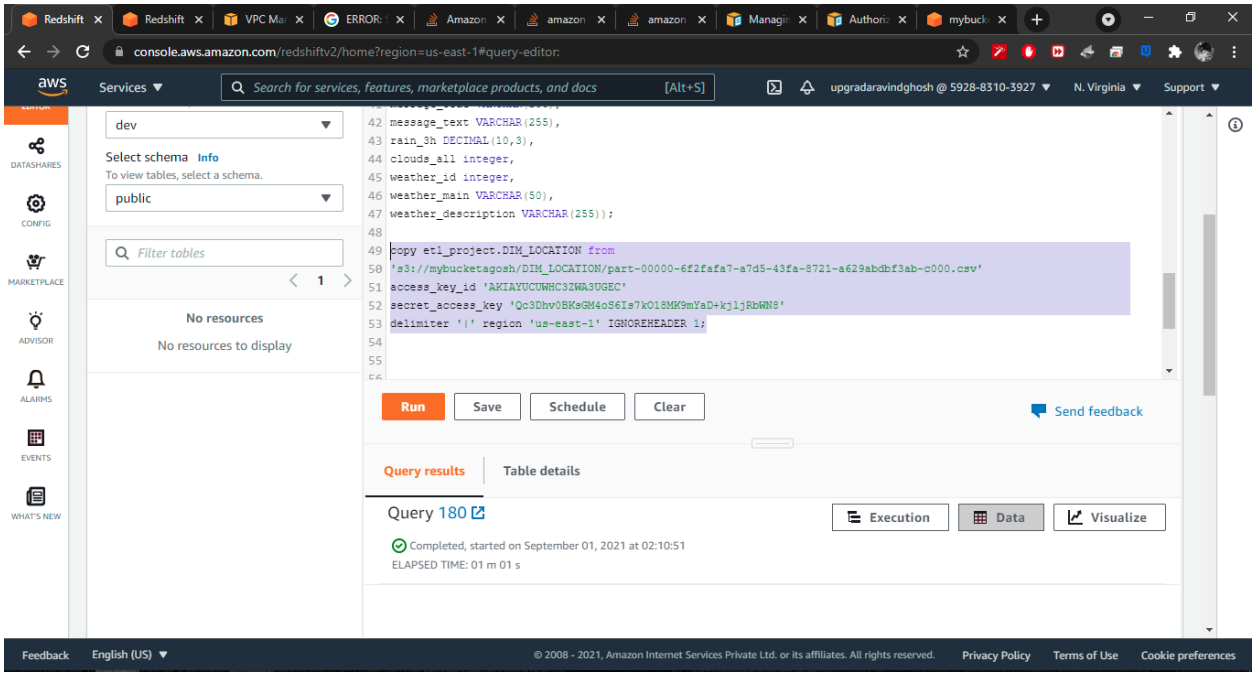
```
create table etl_project.FACT_ATM_TRANS(
trans_id BIGINT not null primary key distkey sortkey,
atm_id integer REFERENCES etl_project.DIM_ATM (atm_id),
weather_loc_id integer REFERENCES etl_project.DIM_LOCATION (atm_location_id),
date_id integer REFERENCES etl_project.DIM_DATE (date_id),
card_type_id integer REFERENCES etl_project.DIM_CARD_TYPE (card_type_id),
atm_status VARCHAR(20),
currency VARCHAR(10),
service VARCHAR(20),
transaction_amount integer,
message_code VARCHAR(255),
message_text VARCHAR(255),
rain_3h DECIMAL(10,3),
clouds_all integer,
weather_id integer,
weather_main VARCHAR(50),
weather_description VARCHAR(255));
```



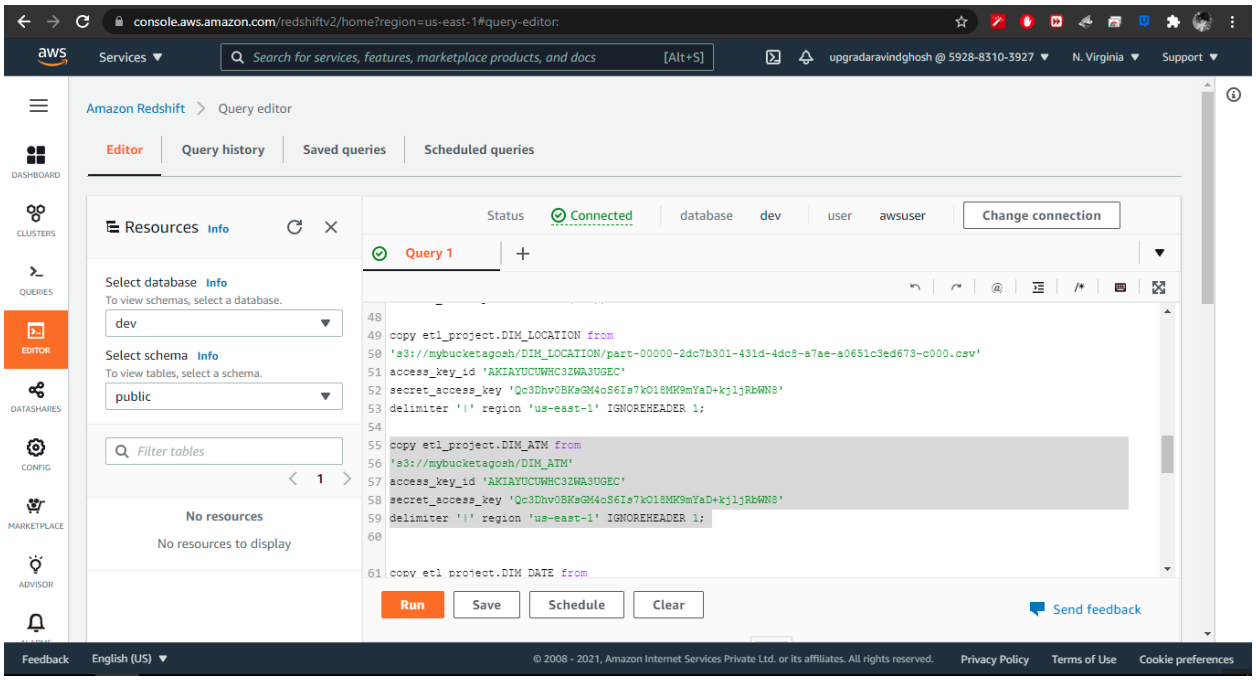
Loading data into a RedShift cluster from Amazon S3 bucket

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

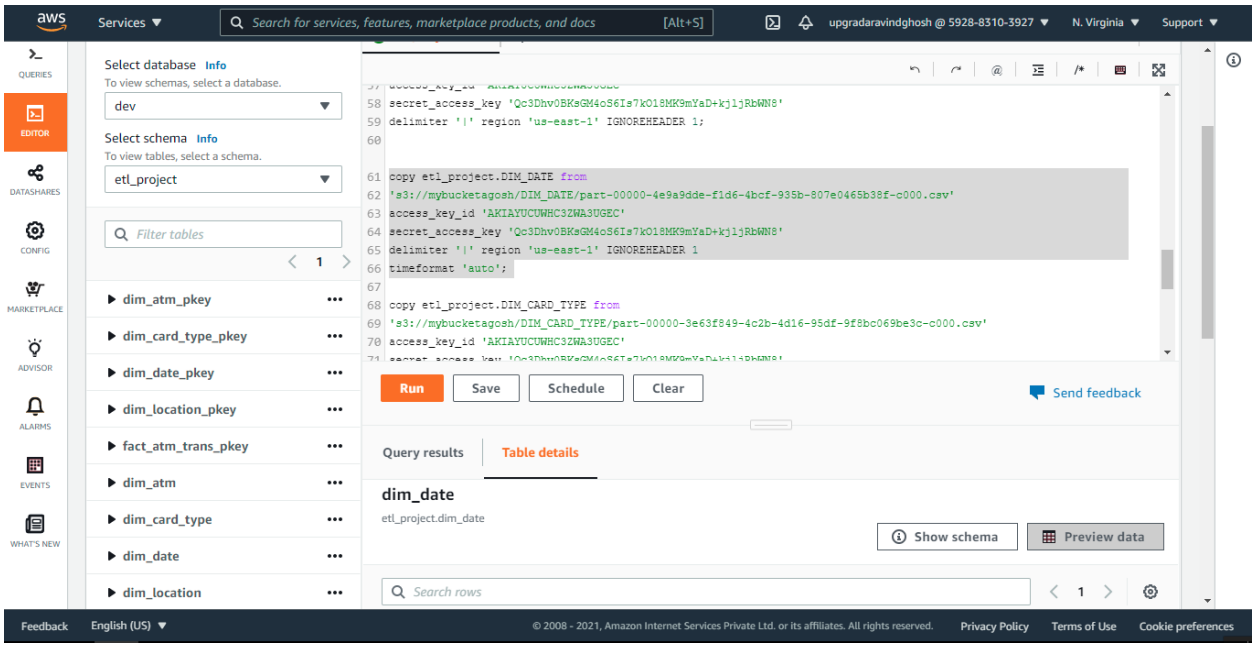
```
copy etl_project.DIM_LOCATION from
's3://mybucketagosh/DIM_LOCATION/part-00000-6f2fafa7-a7d5-43fa-8721-a629abdbf3ab-c000.csv'
access_key_id 'AKIAYUCUWHC3ZWA3UGEC'
secret_access_key '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'
delimiter '|' region 'us-east-1' IGNOREHEADER 1;
```



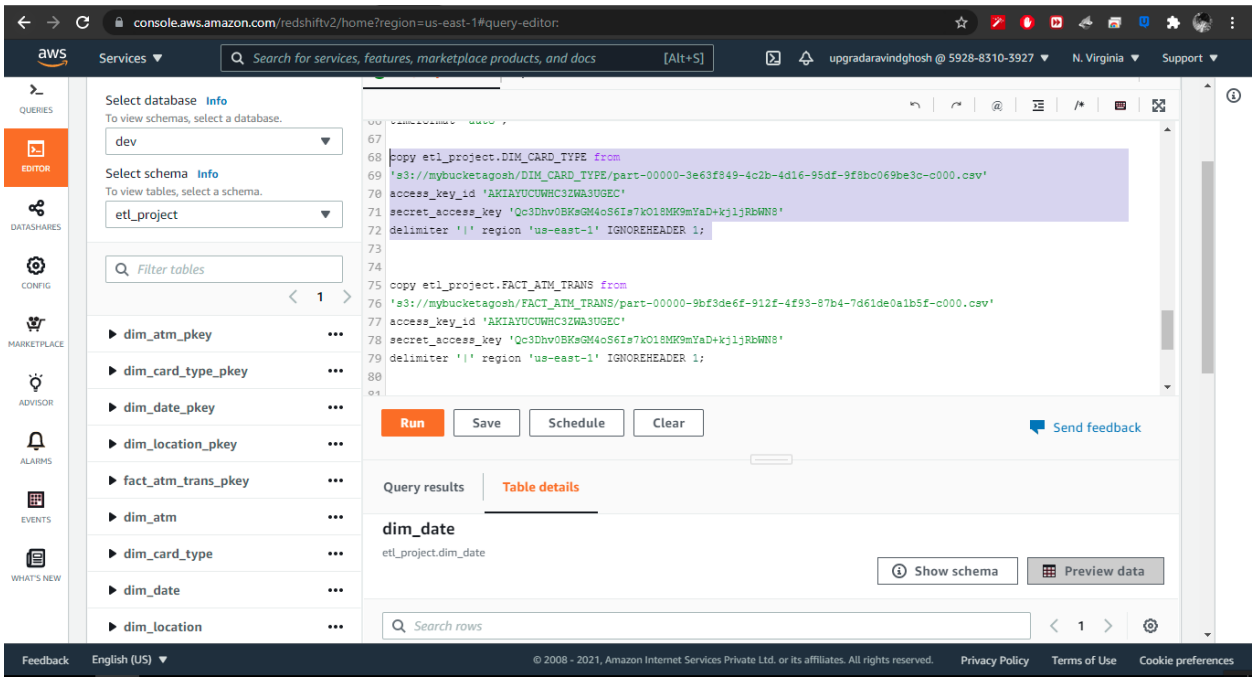
copy etl_project.DIM_ATM from
's3://mybucketagosh/DIM_ATM'
access_key_id 'AKIAYUCUWHC3ZWA3UGEC'
secret_access_key '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'
delimiter '|' region 'us-east-1' IGNOREHEADER 1;



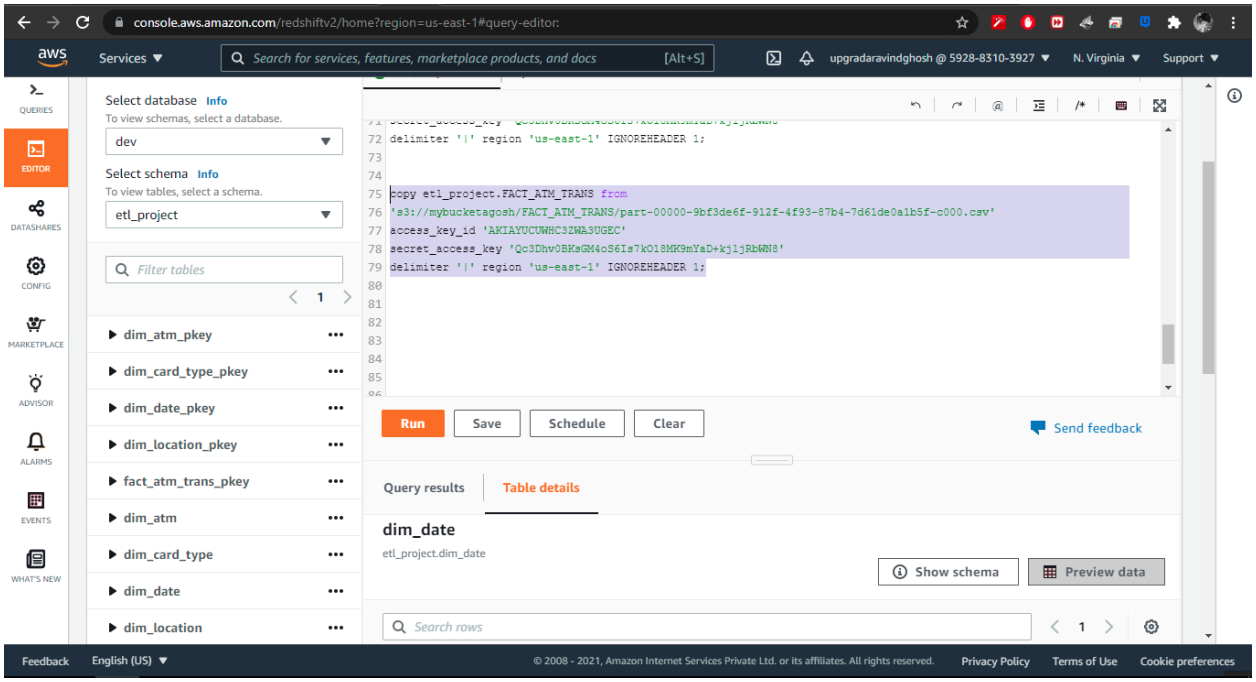
copy etl_project.DIM_DATE from
's3://mybucketagosh/DIM_DATE/part-00000-4e9a9dde-f1d6-4bcf-935b-807e0465b38f-c000.csv'
access_key_id 'AKIAYUCUWHC3ZWA3UGEC'
secret_access_key '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'
delimiter '|' region 'us-east-1' IGNOREHEADER 1
timeformat 'auto';



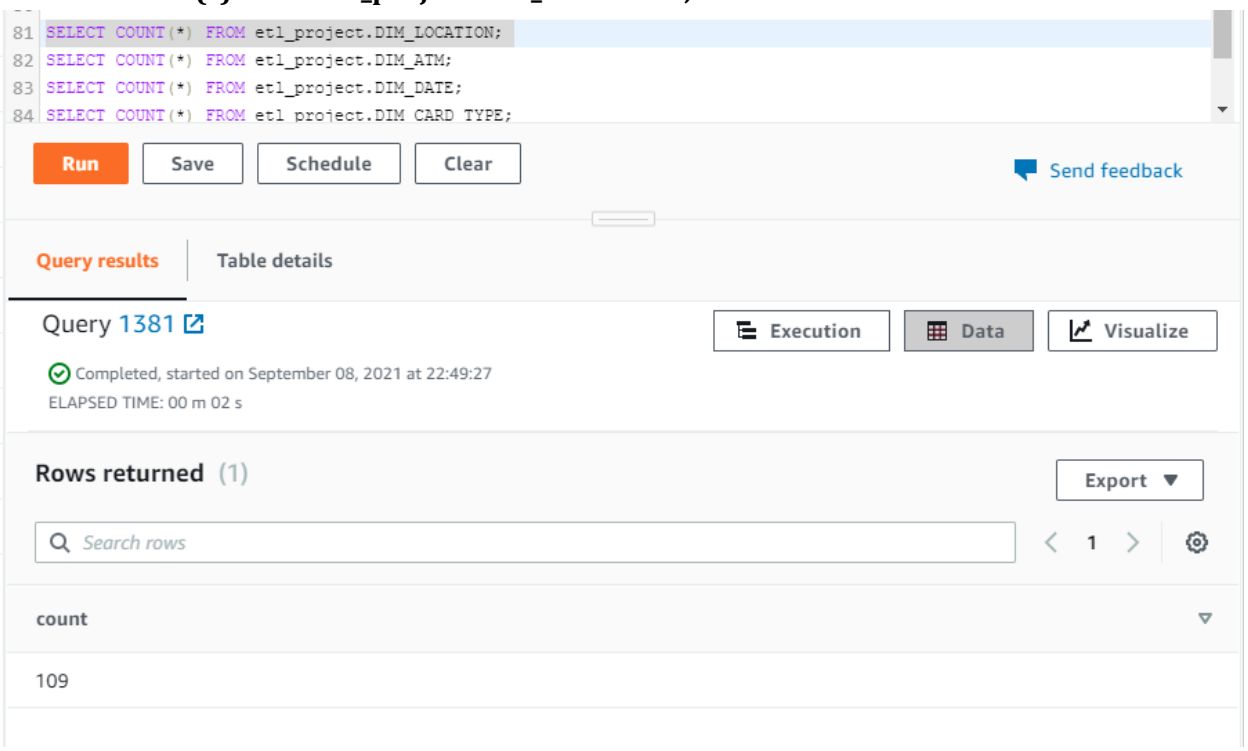
copy etl_project.DIM_CARD_TYPE from 's3://mybucketagosh/DIM_CARD_TYPE/part-00000-3e63f849-4c2b-4d16-95df-9f8bc069be3c-c000.csv' access_key_id 'AKIAYUCUWHC3ZWA3UGEC' secret_access_key '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' delimiter '|' region 'us-east-1' IGNOREHEADER 1;



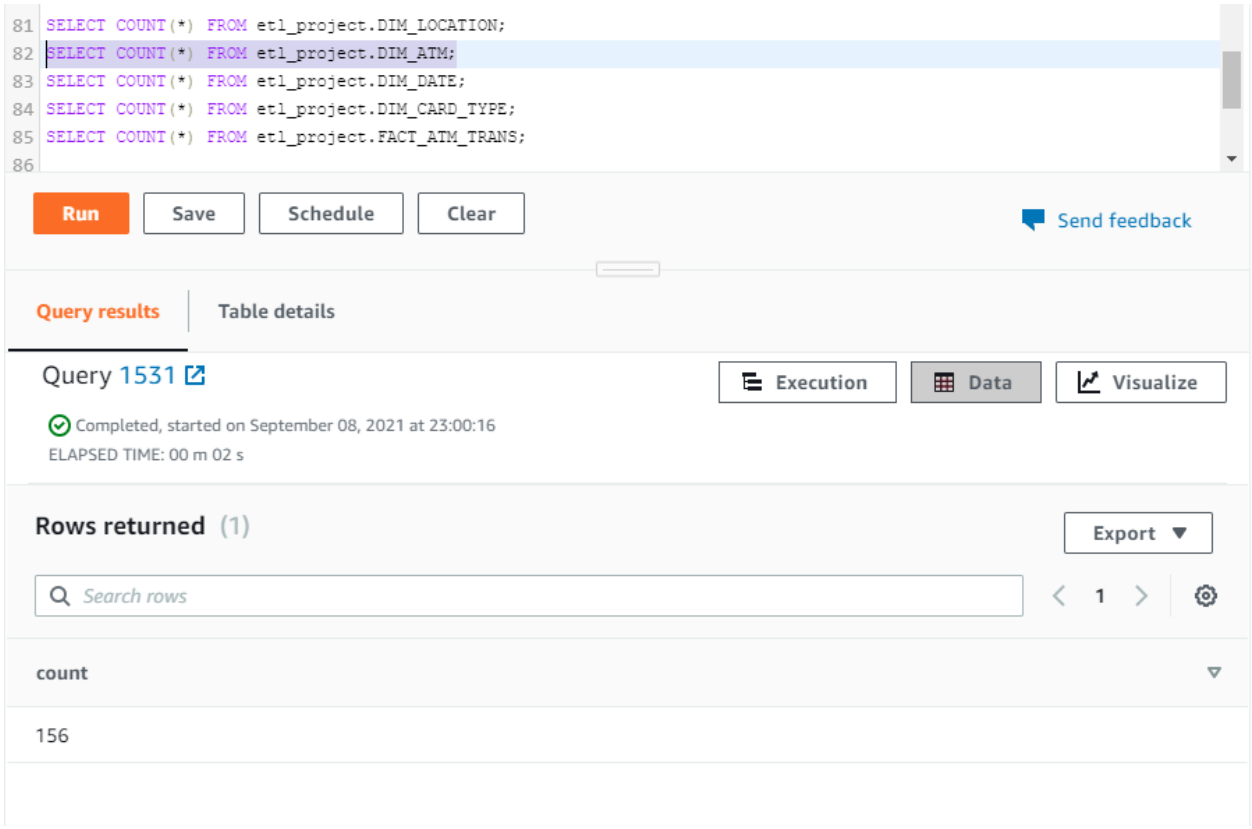
copy etl_project.FACT_ATM_TRANS from
's3://mybucketagosh/FACT_ATM_TRANS/part-00000-9bf3de6f-912f-4f93-87b4-7d61de0a1b5f-c000.csv'
access_key_id 'AKIAYUCUWHC3ZWA3UGEC'
secret_access_key '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'
delimiter '|' region 'us-east-1' IGNOREHEADER 1;



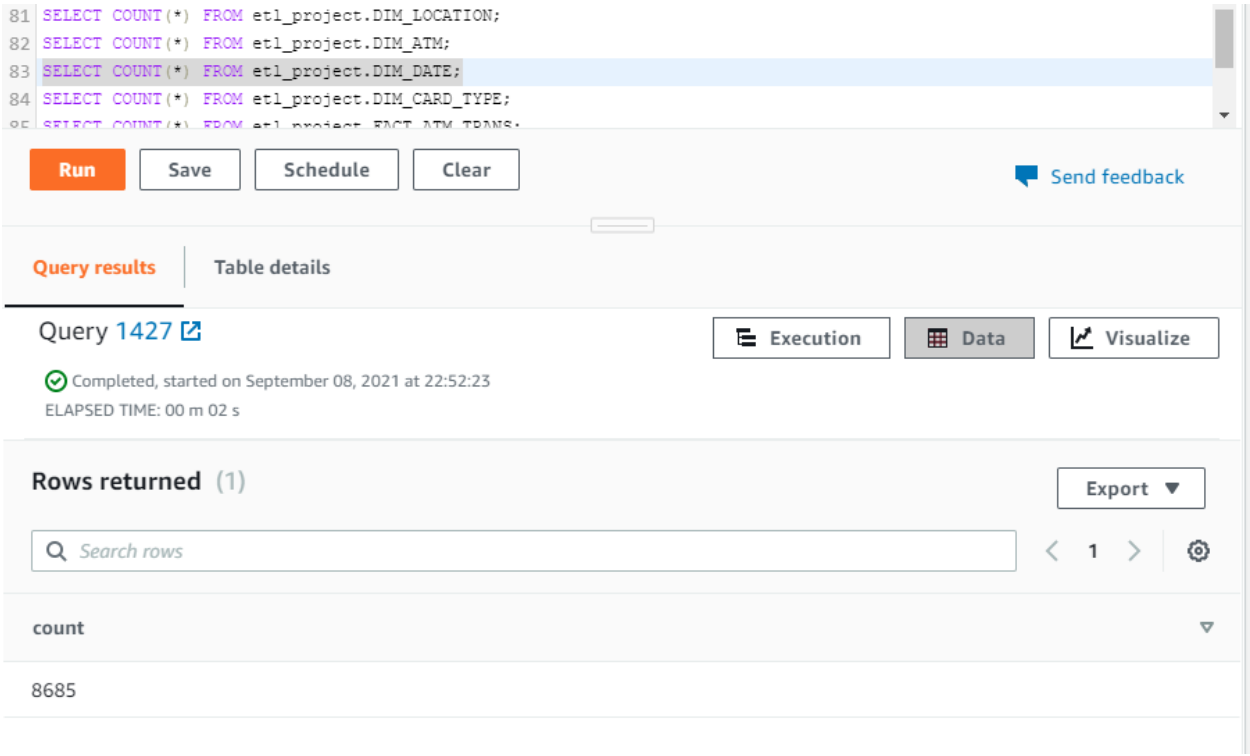
SELECT COUNT(*) FROM etl_project.DIM_LOCATION;



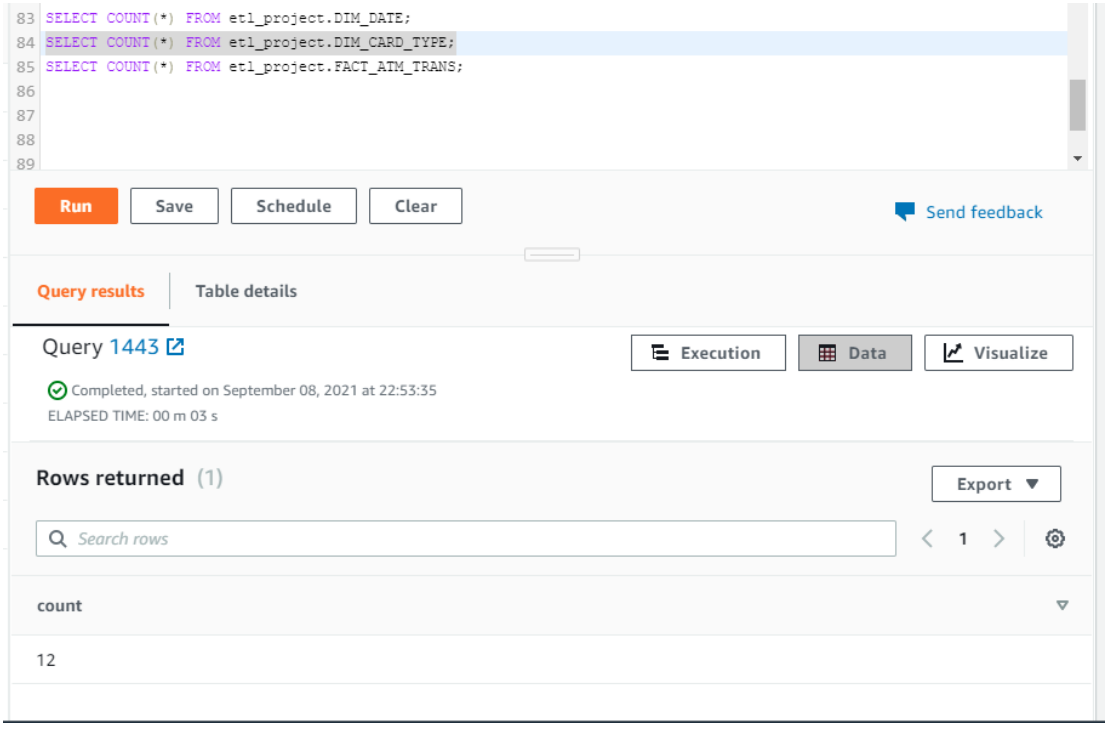
SELECT COUNT(*) FROM etl_project.DIM_ATM;



SELECT COUNT(*) FROM etl_project.DIM_DATE;



SELECT COUNT(*) FROM etl_project.DIM_CARD_TYPE;



SELECT COUNT(*) FROM etl_project.FACT_ATM_TRANS;