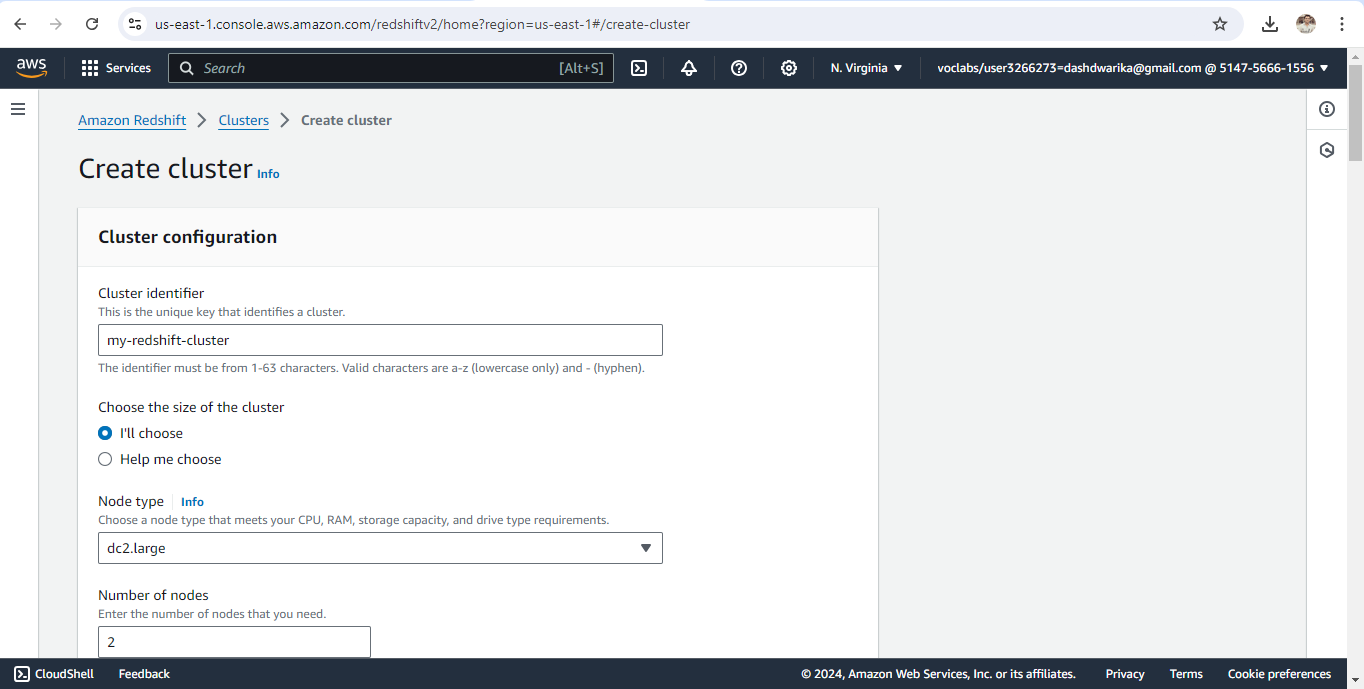
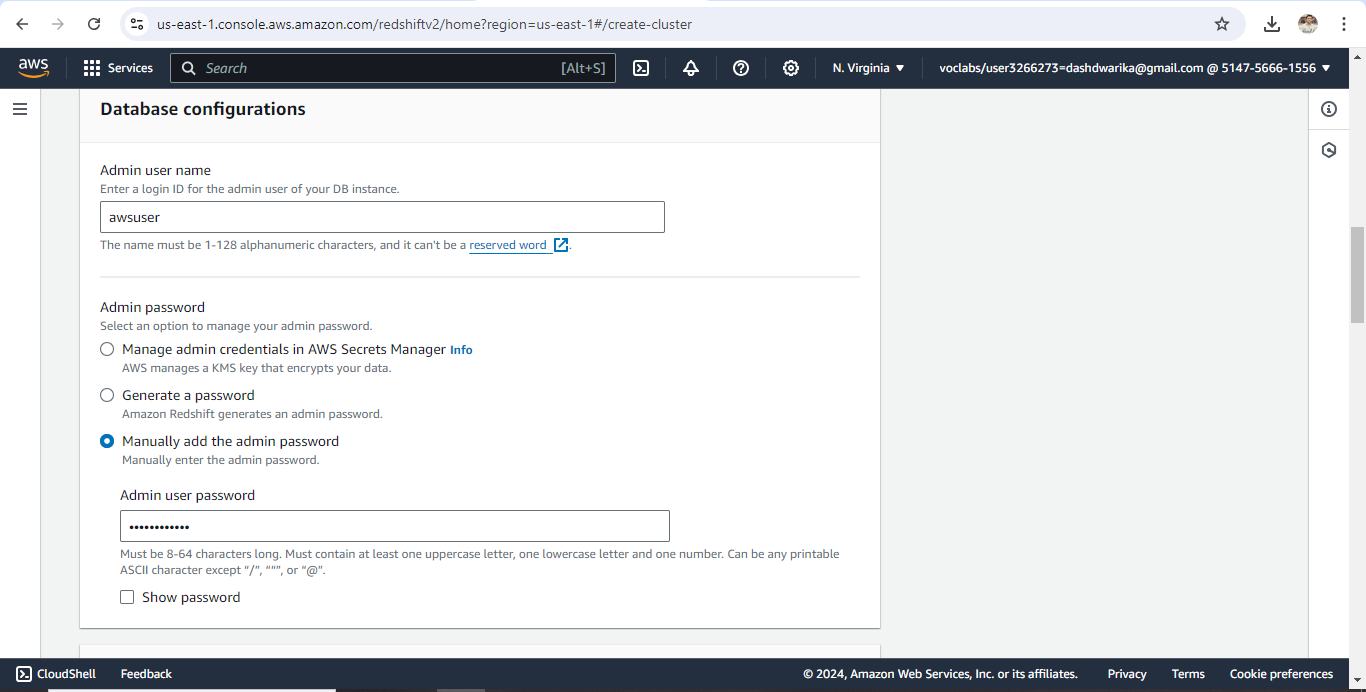
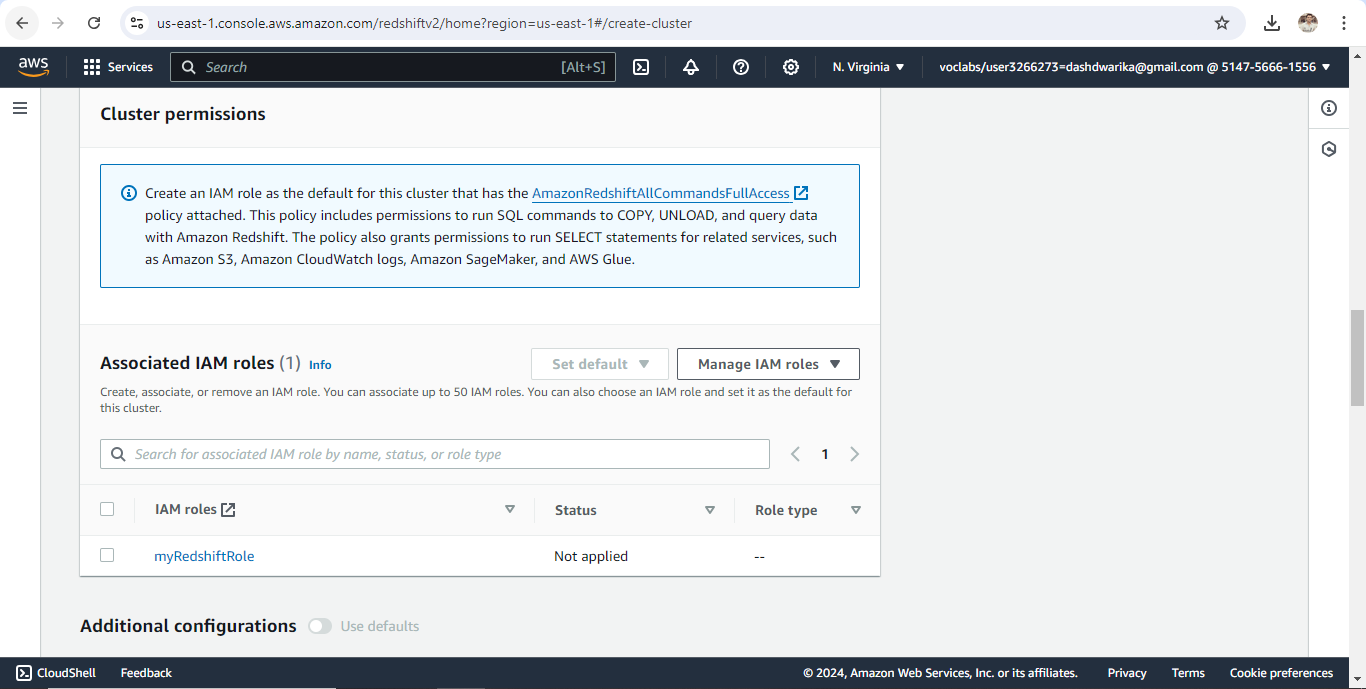
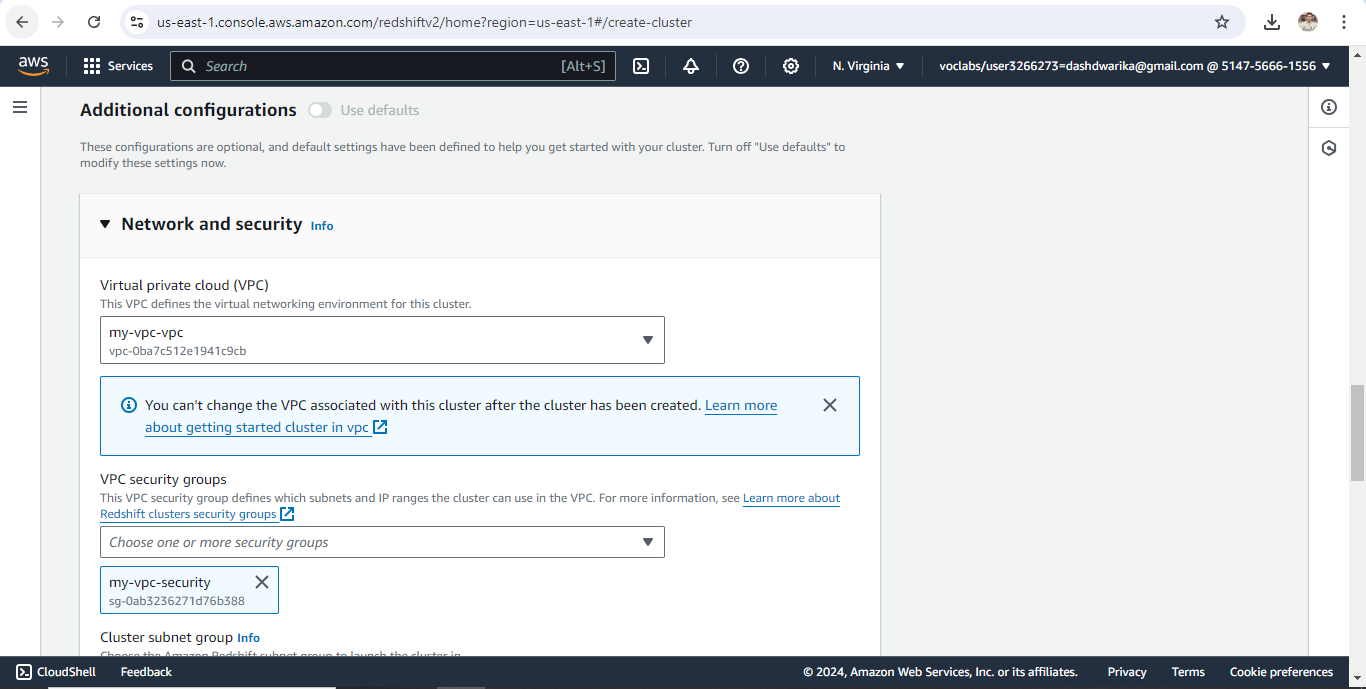
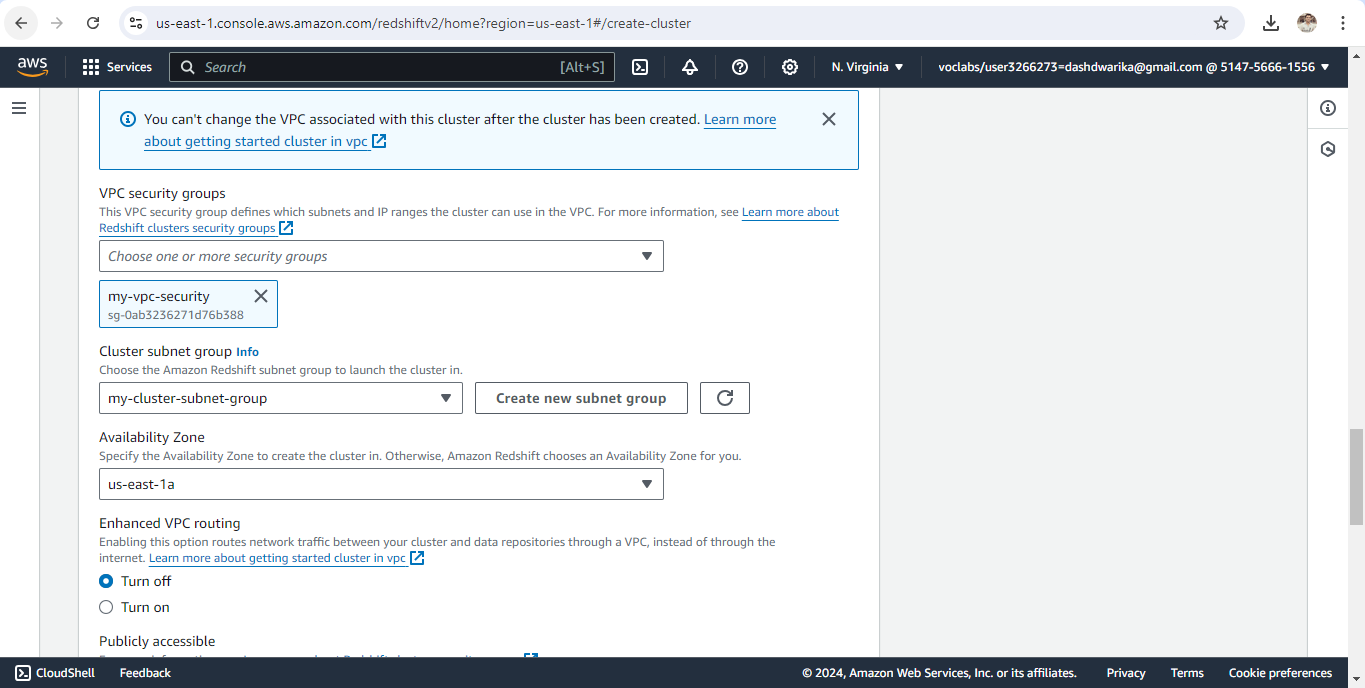
### Creation of a Redshift Cluster

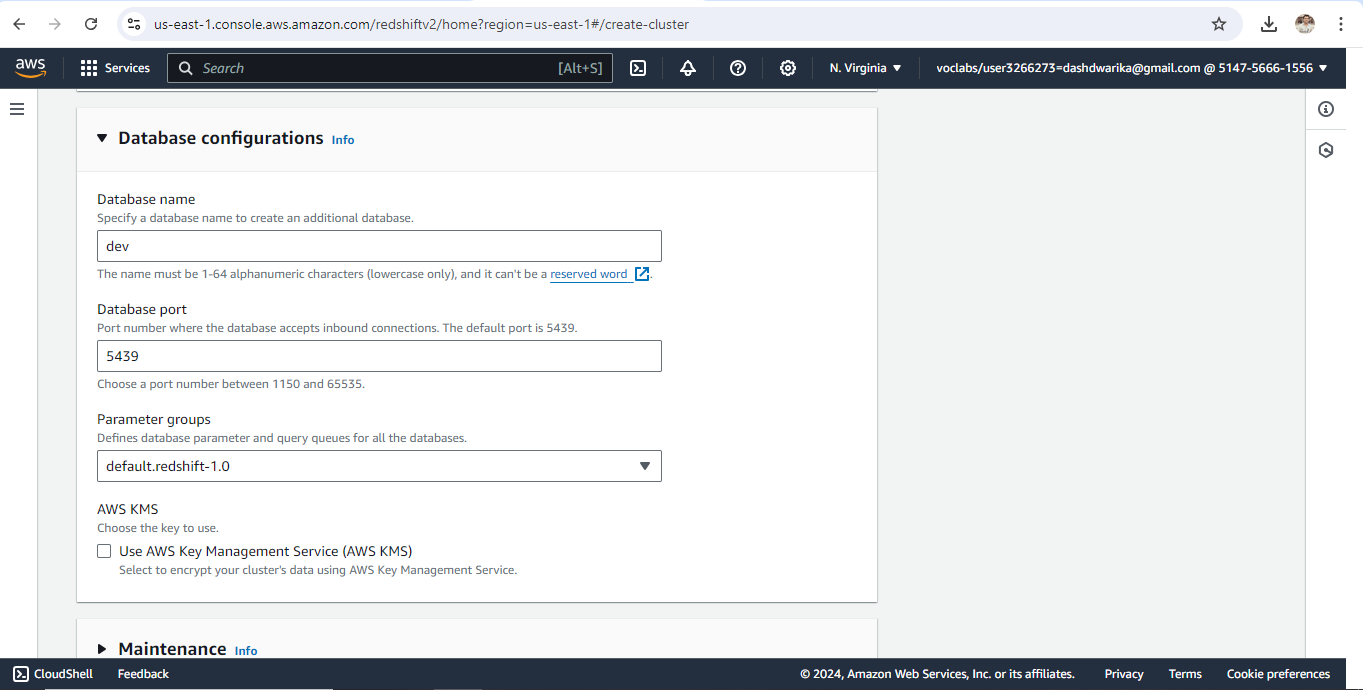


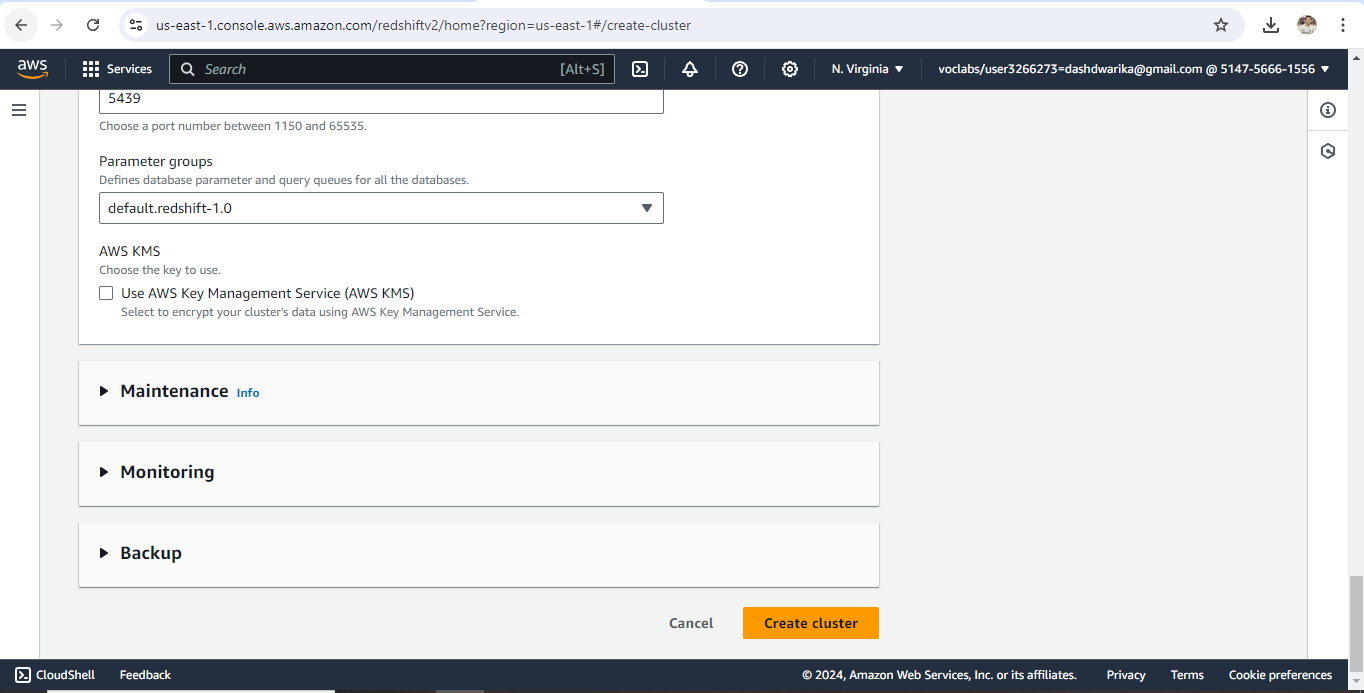


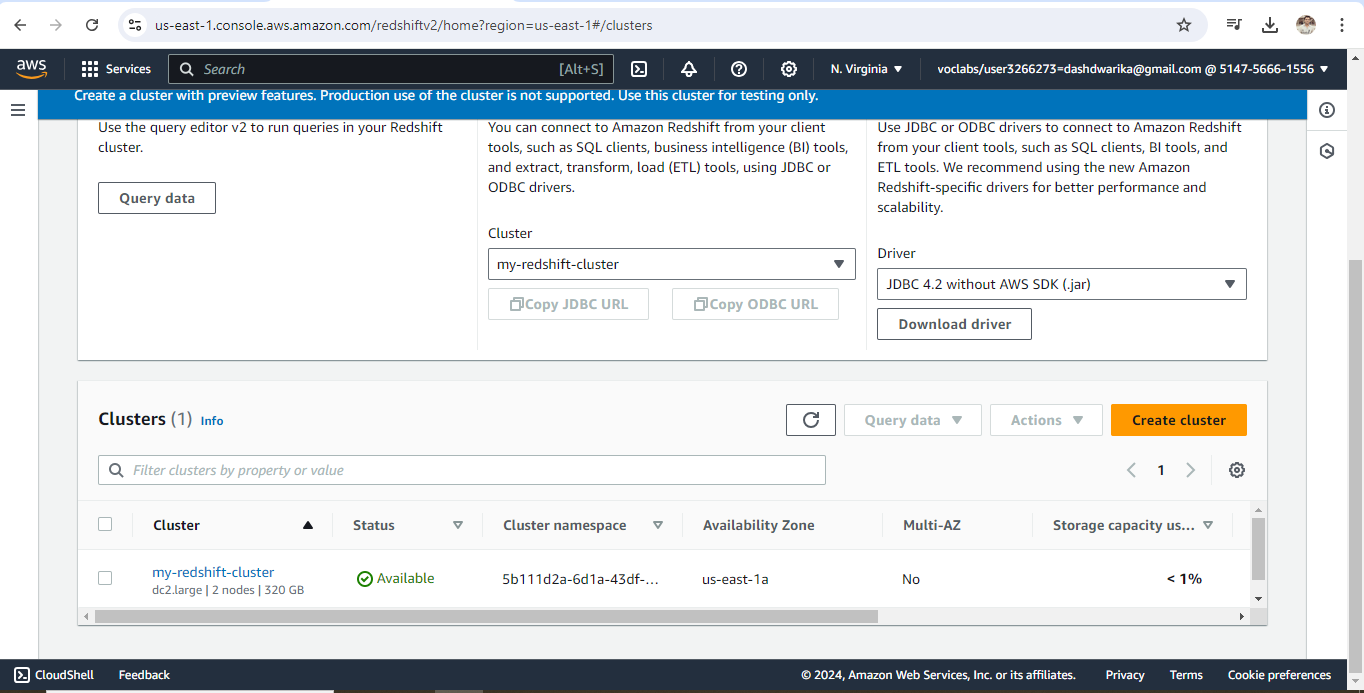








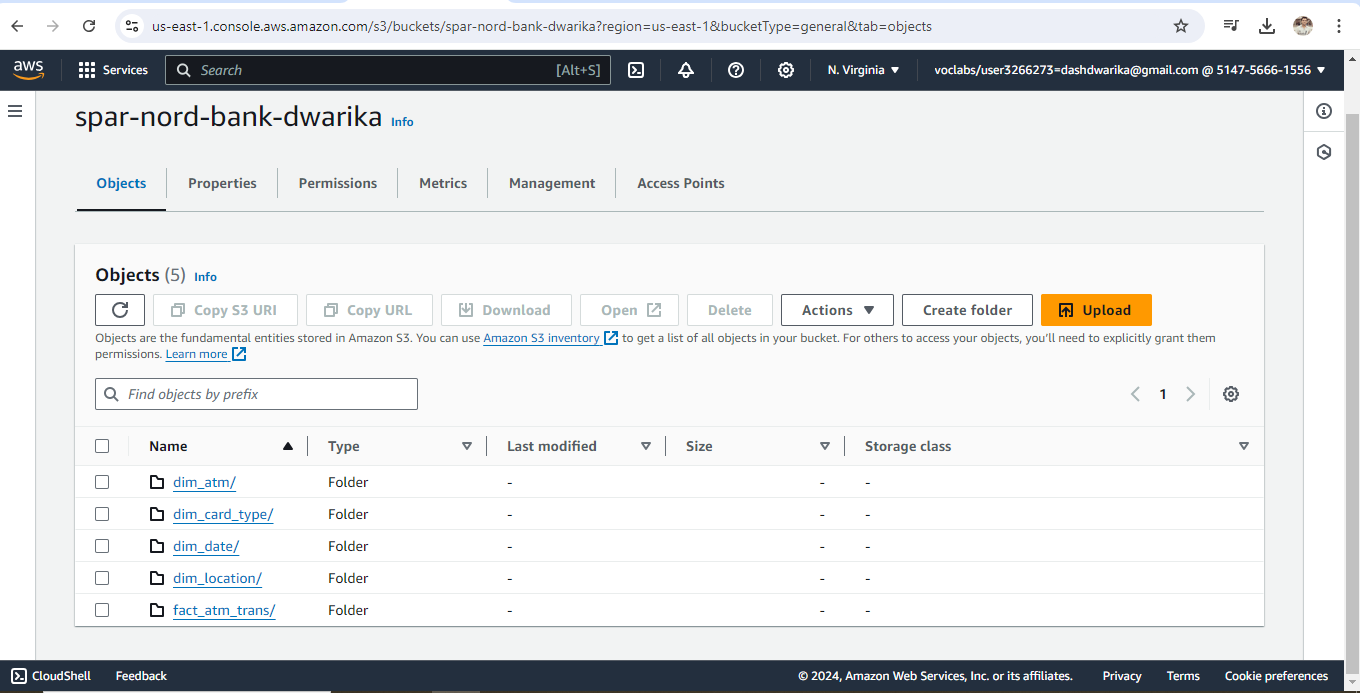




### 

### 

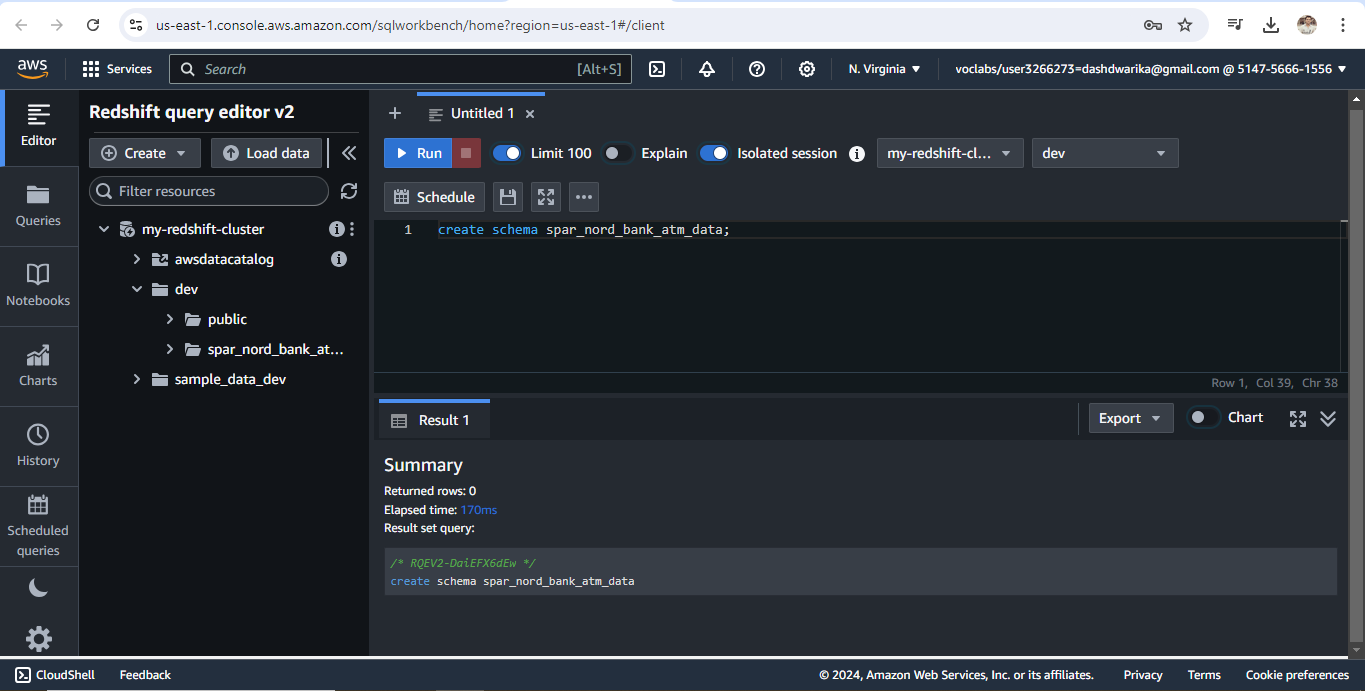
### S3 bucket containing files:



### 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:**

create schema spar\_nord\_bank\_atm\_data;



create table spar\_nord\_bank\_atm\_data.DIM\_LOCATION

(

location\_id int not null DISTKEY SORTKEY,

location varchar(50),

streetname varchar(255),

street\_number int,

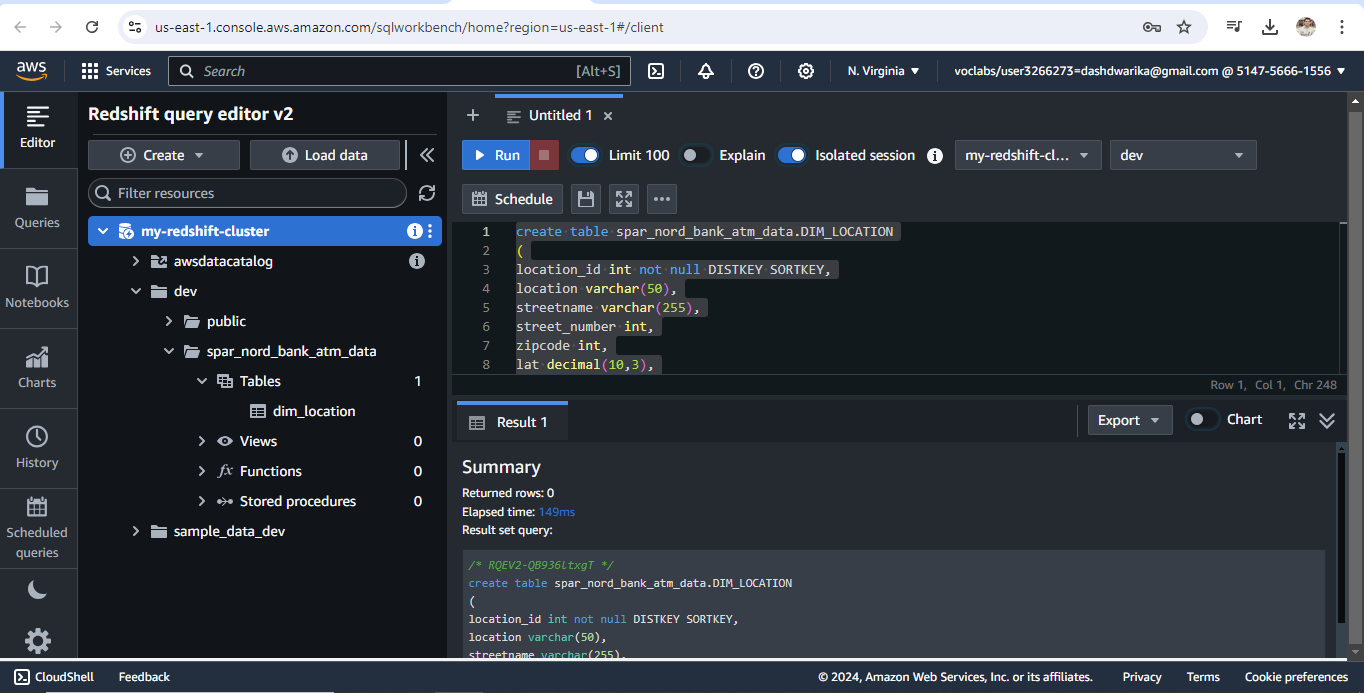
zipcode int,

lat decimal(10,3),

lon decimal(10,3),

PRIMARY KEY(location\_id)

);



create table spar\_nord\_bank\_atm\_data.DIM\_ATM

(

atm\_id int not null DISTKEY SORTKEY,

atm\_number varchar(20),

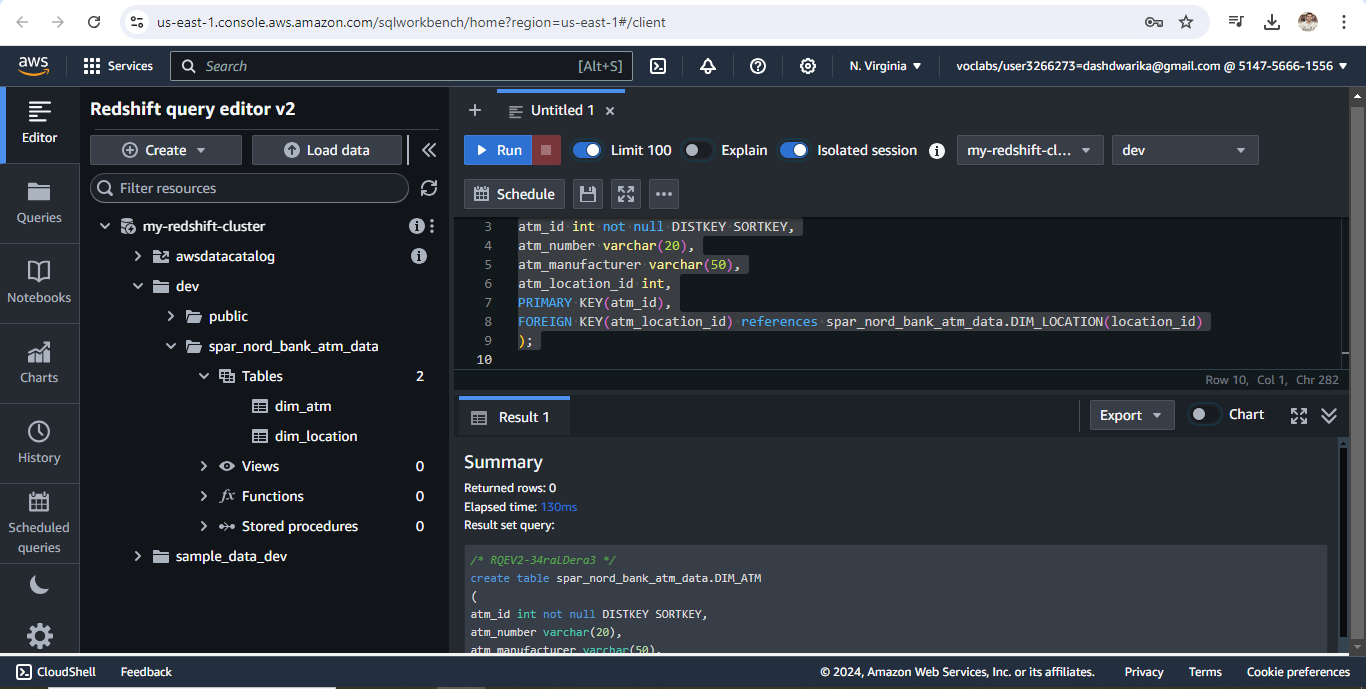
atm\_manufacturer varchar(50),

atm\_location\_id int,

PRIMARY KEY(atm\_id),

FOREIGN KEY(atm\_location\_id) references spar\_nord\_bank\_atm\_data.DIM\_LOCATION(location\_id)

);



create table spar\_nord\_bank\_atm\_data.DIM\_DATE

(

date\_id int not null DISTKEY SORTKEY,

full\_date\_time timestamp,

year int,

month varchar(20),

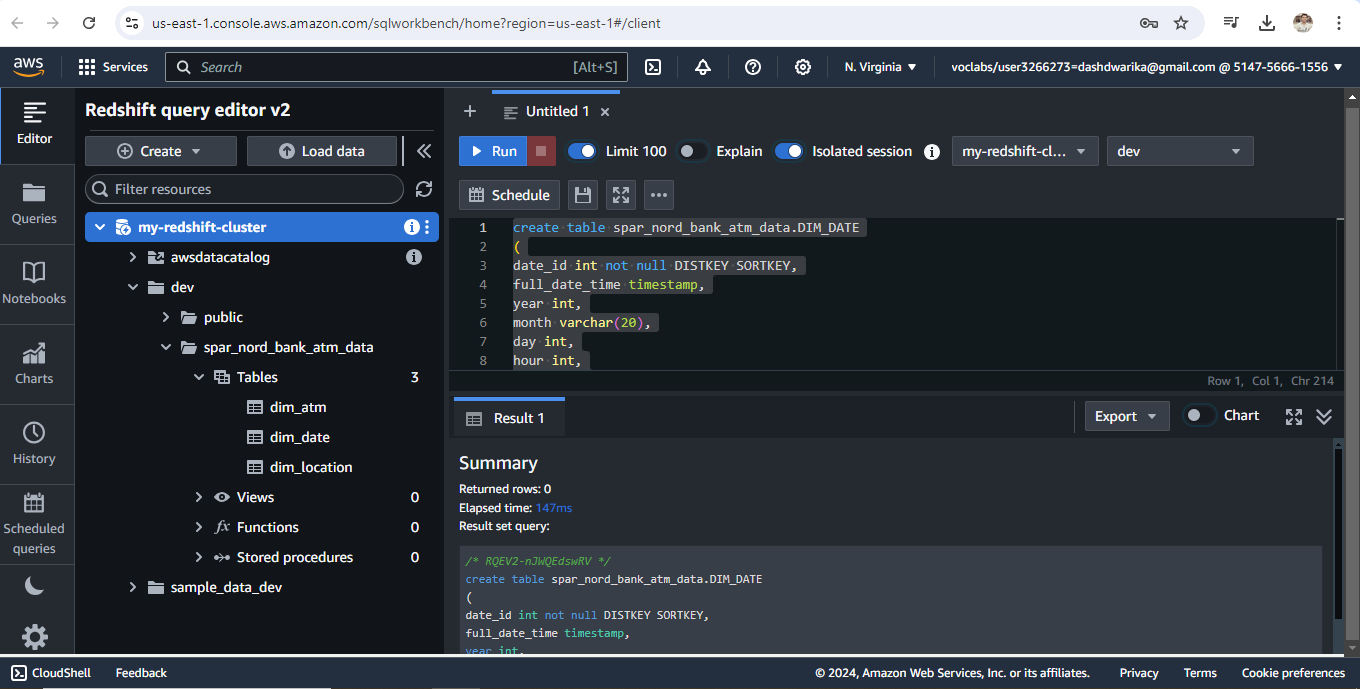
day int,

hour int,

weekday varchar(20),

PRIMARY KEY(date\_id)

);



create table spar\_nord\_bank\_atm\_data.DIM\_CARD\_TYPE

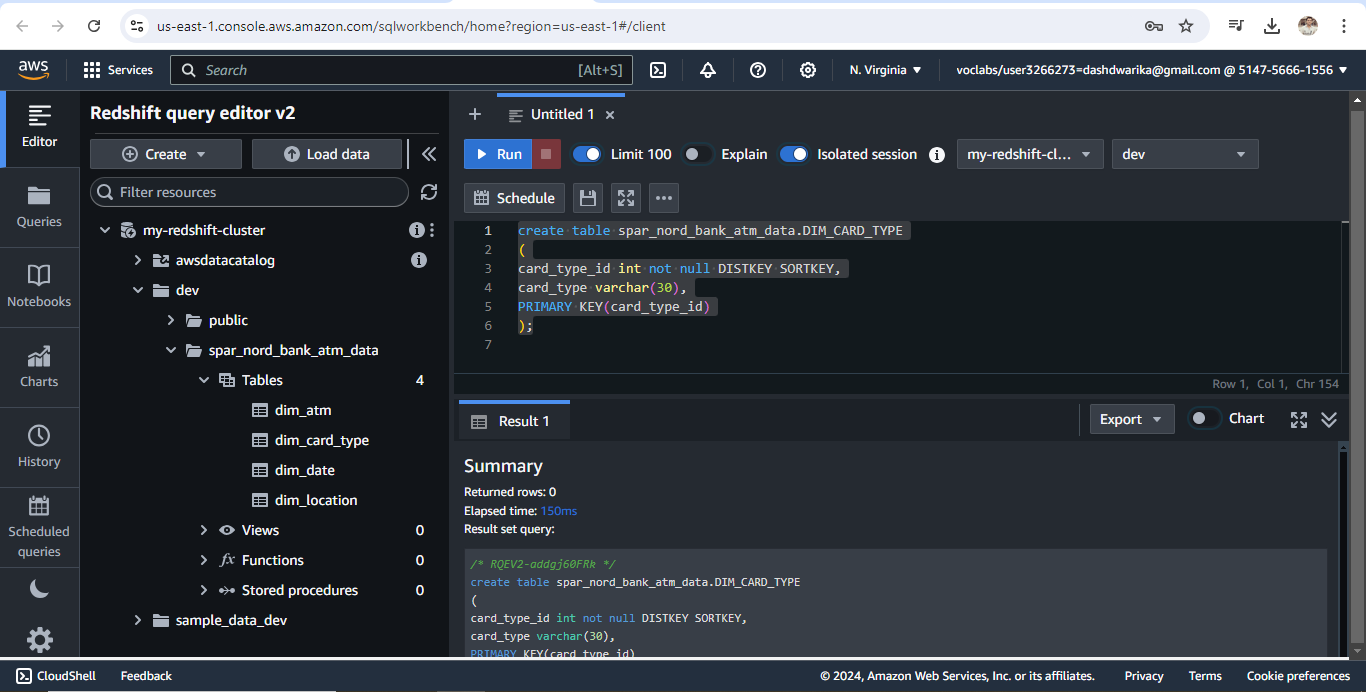
(

card\_type\_id int not null DISTKEY SORTKEY,

card\_type varchar(30),

PRIMARY KEY(card\_type\_id)

);



create table spar\_nord\_bank\_atm\_data.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),

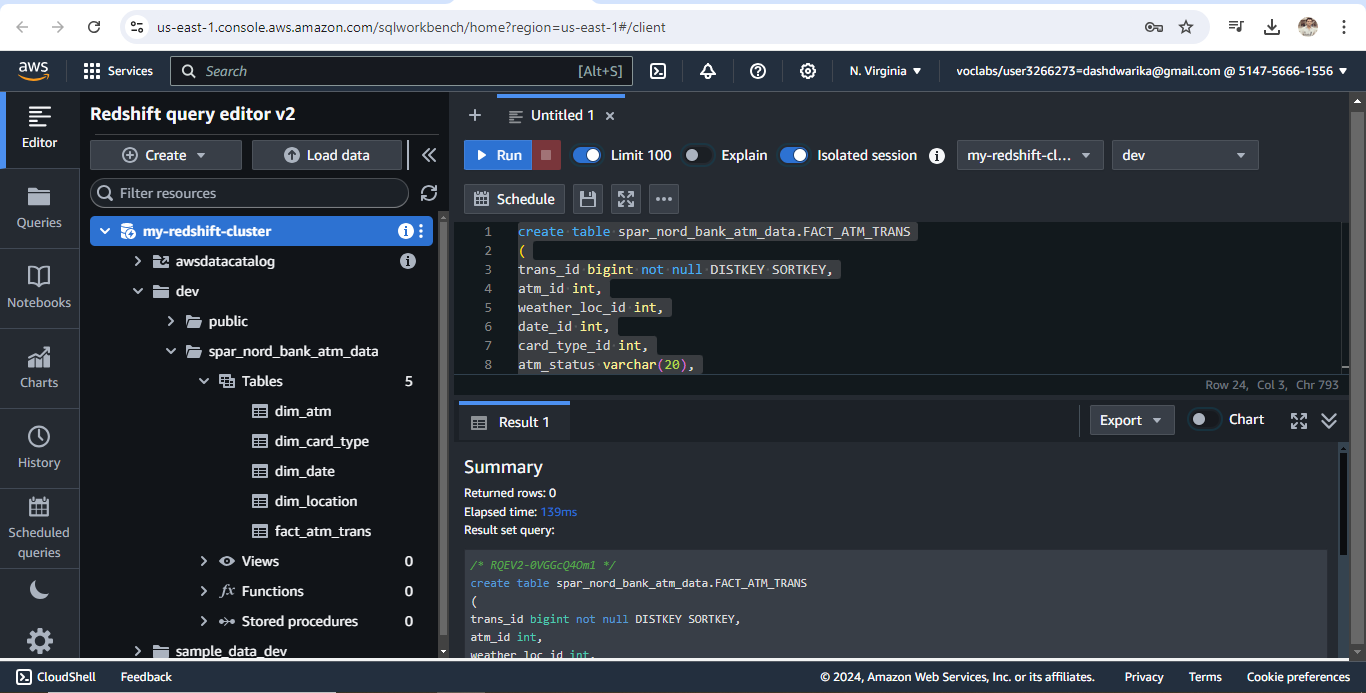
FOREIGN KEY(weather\_loc\_id) references spar\_nord\_bank\_atm\_data.DIM\_LOCATION(location\_id),

FOREIGN KEY(atm\_id) references spar\_nord\_bank\_atm\_data.DIM\_ATM(atm\_id),

FOREIGN KEY(date\_id) references spar\_nord\_bank\_atm\_data.DIM\_DATE(date\_id),

FOREIGN KEY(card\_type\_id) references spar\_nord\_bank\_atm\_data.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**

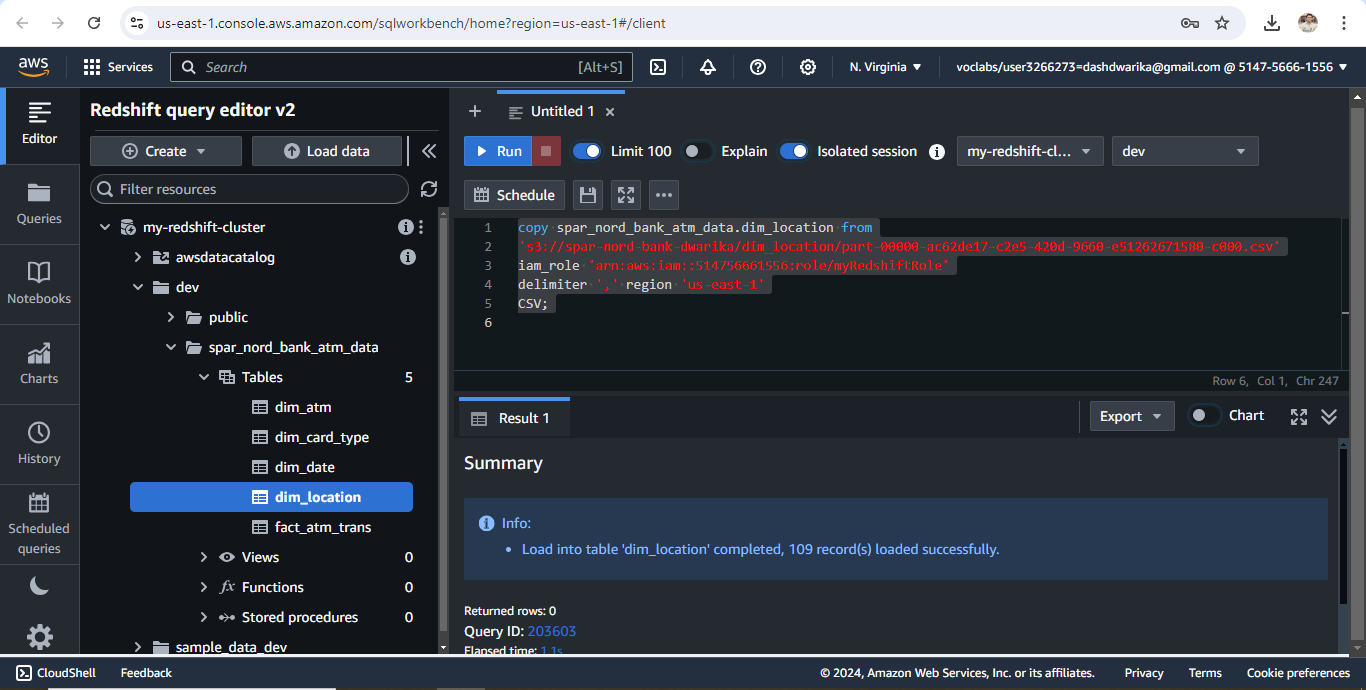
copy spar\_nord\_bank\_atm\_data.dim\_location from

's3://spar-nord-bank-dwarika/dim\_location/part-00000-ac62de17-c2e5-420d-9660-e51262671580-c000.csv'

iam\_role 'arn:aws:iam::514756661556:role/myRedshiftRole'

delimiter ',' region 'us-east-1'

CSV;

****

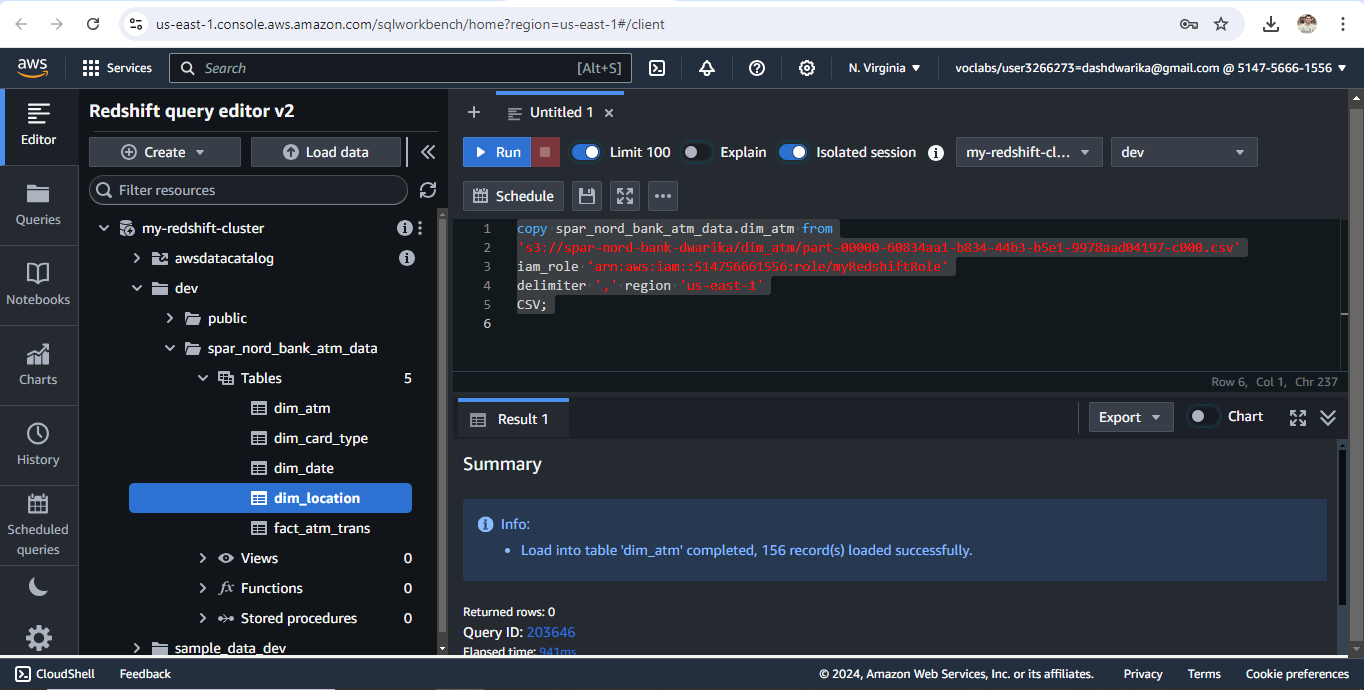
copy spar\_nord\_bank\_atm\_data.dim\_atm from

's3://spar-nord-bank-dwarika/dim\_atm/part-00000-60834aa1-b834-44b3-b5e1-9978aad04197-c000.csv'

iam\_role 'arn:aws:iam::514756661556:role/myRedshiftRole'

delimiter ',' region 'us-east-1'

CSV;

****

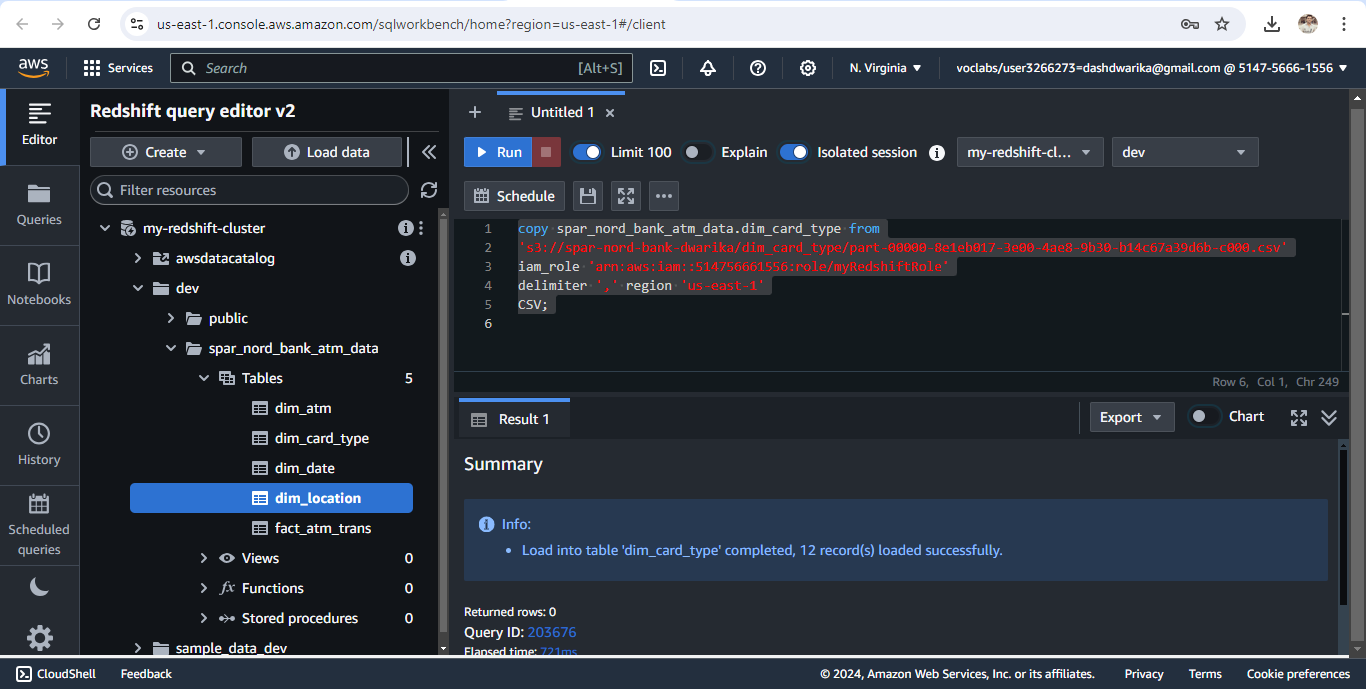
copy spar\_nord\_bank\_atm\_data.dim\_card\_type from

's3://spar-nord-bank-dwarika/dim\_card\_type/part-00000-8e1eb017-3e00-4ae8-9b30-b14c67a39d6b-c000.csv'

iam\_role 'arn:aws:iam::514756661556:role/myRedshiftRole'

delimiter ',' region 'us-east-1'

CSV;

****

copy spar\_nord\_bank\_atm\_data.dim\_date from

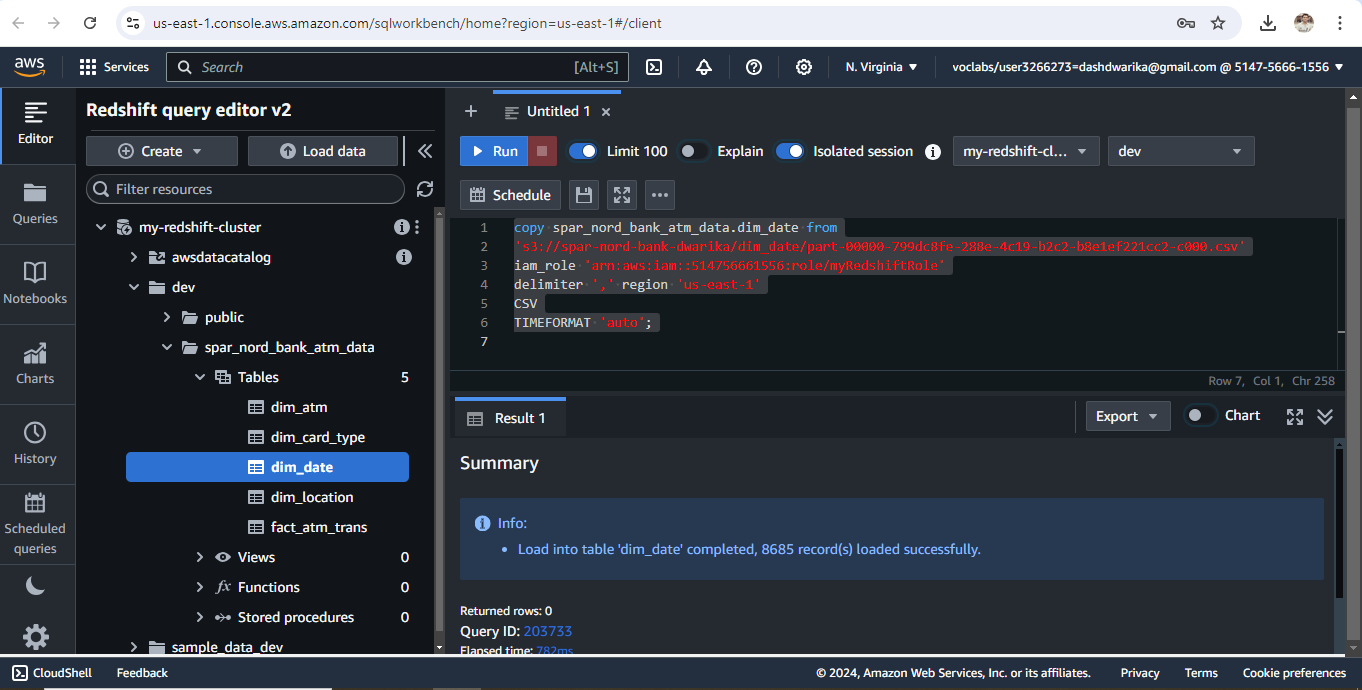
's3://spar-nord-bank-dwarika/dim\_date/part-00000-799dc8fe-288e-4c19-b2c2-b8e1ef221cc2-c000.csv'

iam\_role 'arn:aws:iam::514756661556:role/myRedshiftRole'

delimiter ',' region 'us-east-1'

CSV

TIMEFORMAT 'auto';

****

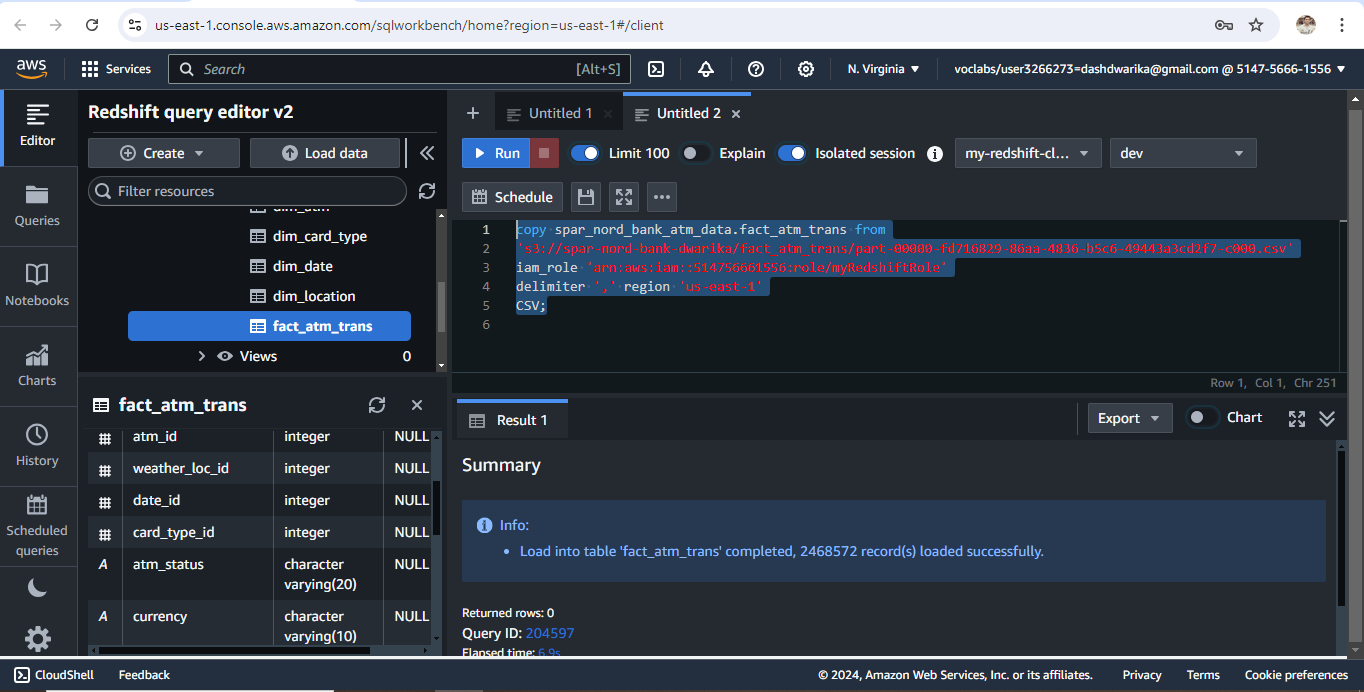
copy spar\_nord\_bank\_atm\_data.fact\_atm\_trans from

's3://spar-nord-bank-dwarika/fact\_atm\_trans/part-00000-fd716829-86aa-4836-b5c6-49443a3cd2f7-c000.csv'

iam\_role 'arn:aws:iam::514756661556:role/myRedshiftRole'

delimiter ',' region 'us-east-1'

CSV;

****