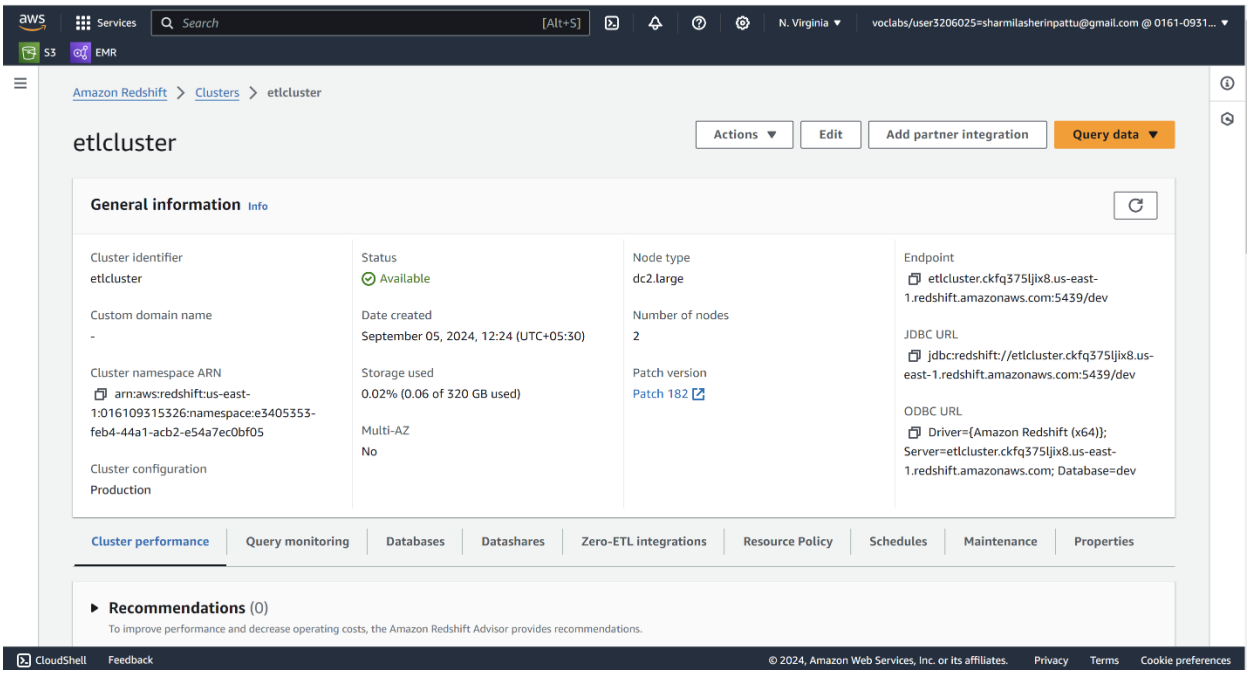
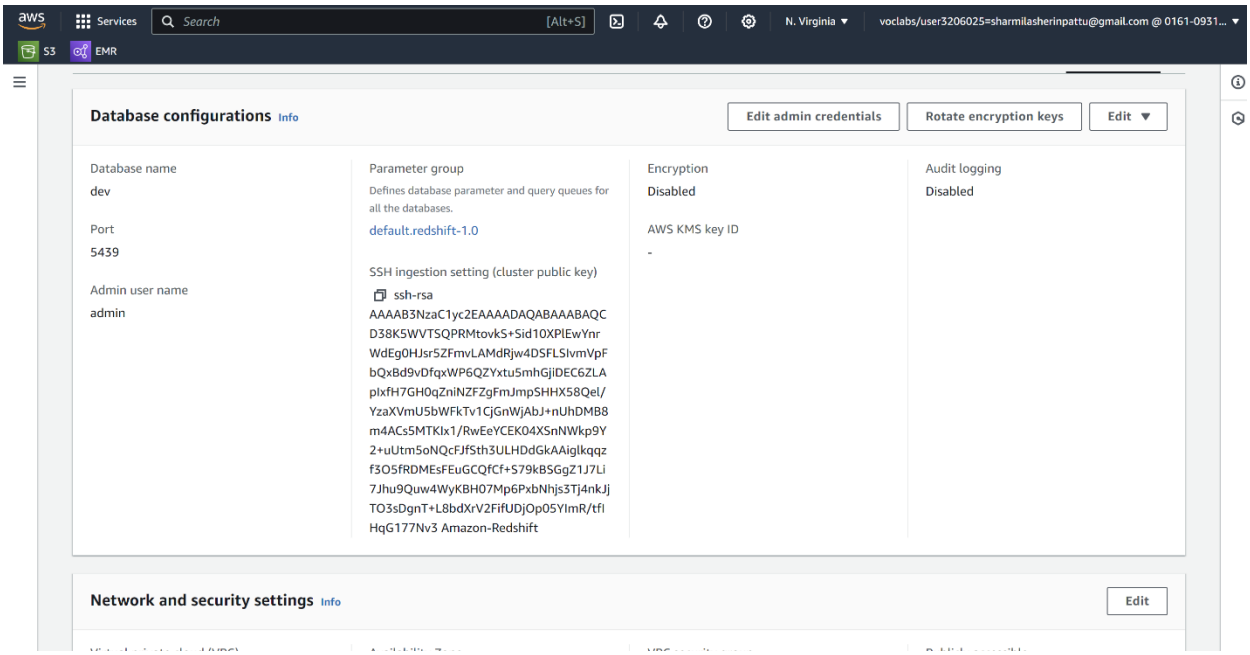
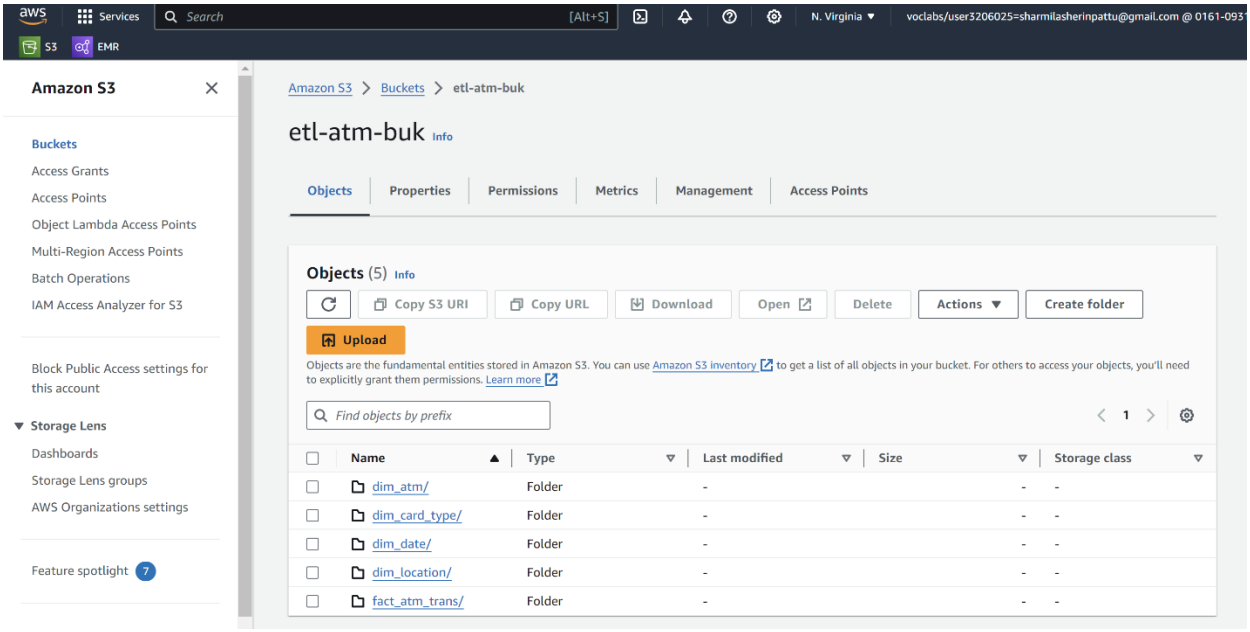
Creation of a Redshift Cluster

Screenshots of the configuration of the Redshift cluster that I have created:



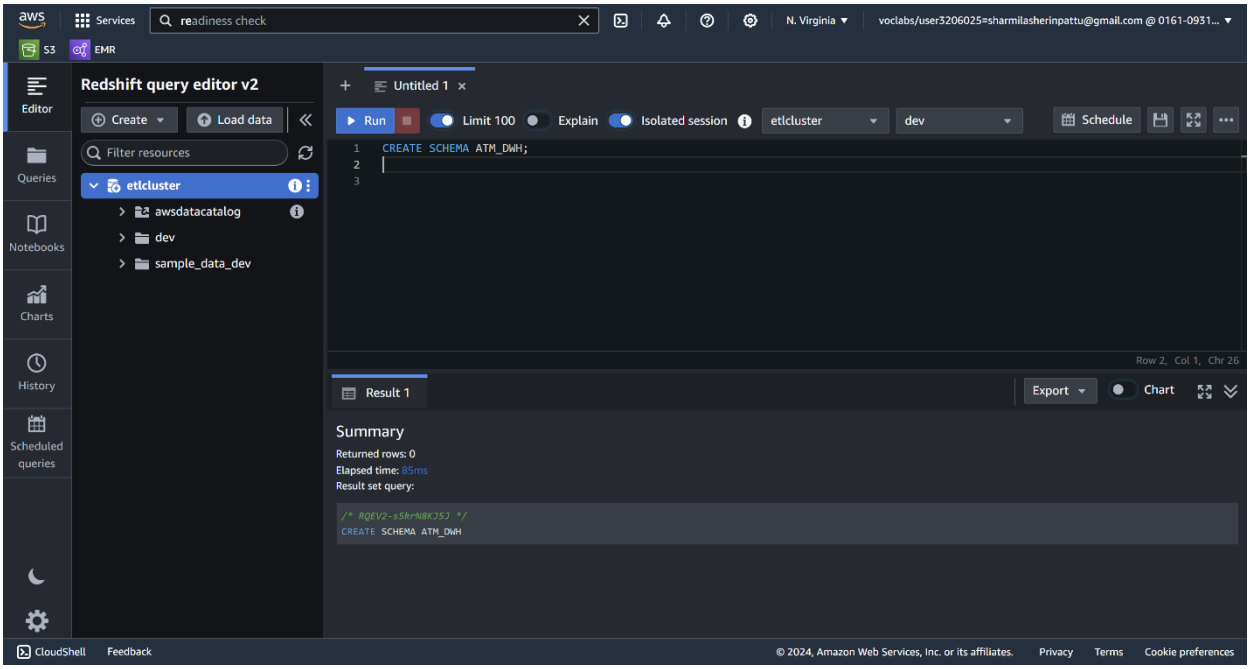


Checking the s3 bucket for the five pushed csv files:



Queries to copy the data from S3 buckets to the Redshift cluster in the appropriate tables
Create schema:

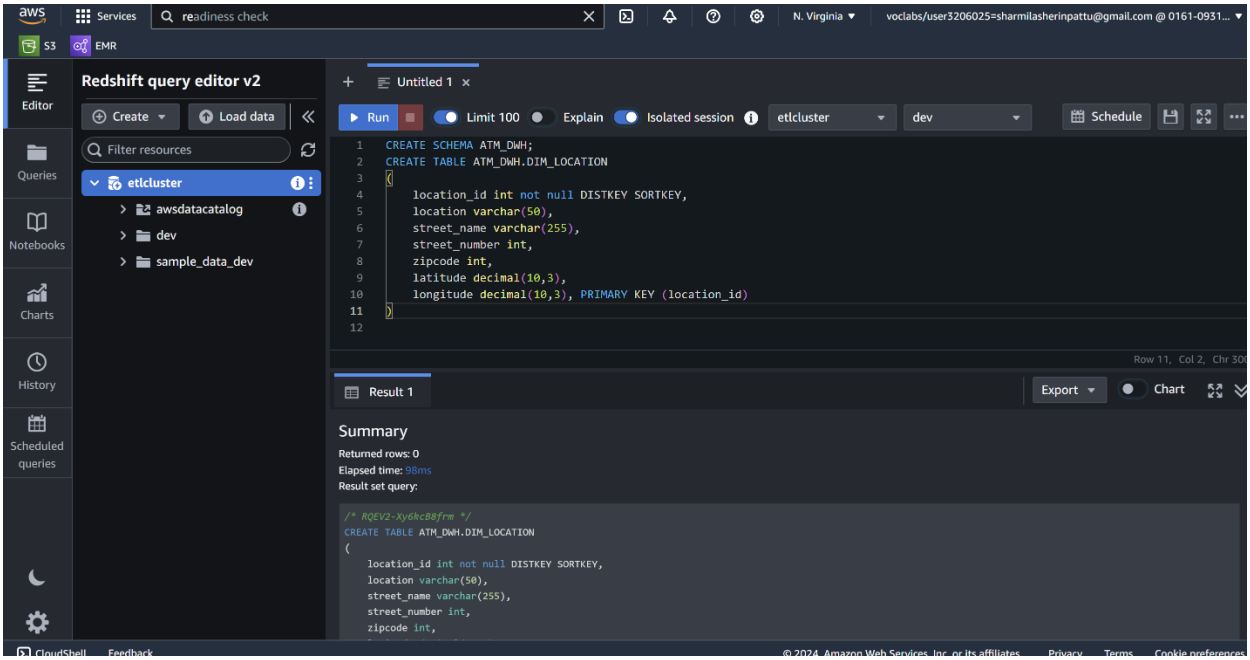
Query: create schema ATM_DWH;



Create DIM_LOCATION table on Redshift:

Query:

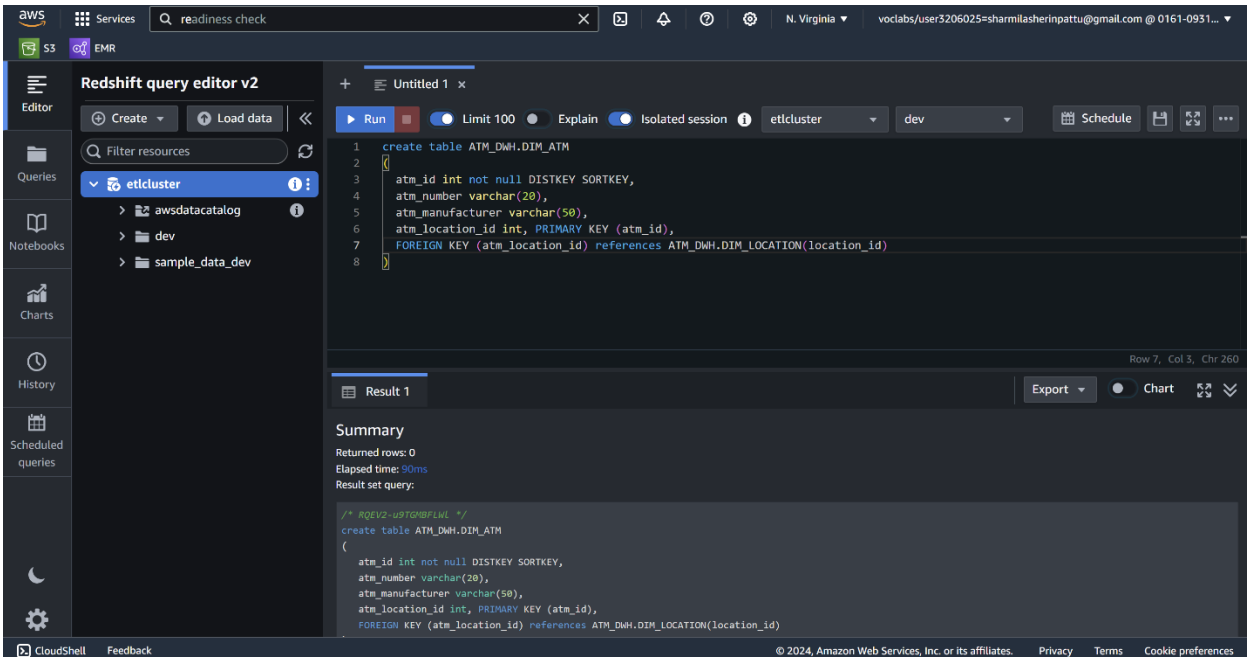
```
create table ATM_DWH.DIM_LOCATION
(
location_id int not null DISTKEY SORTKEY,
location varchar(50),
streetname varchar(255),
street_number int,
zipcode int, lat
decimal(10,3), lon
decimal(10,3),
PRIMARY KEY (location_id));
```



Create DIM_ATM table on Redshift:

Query:

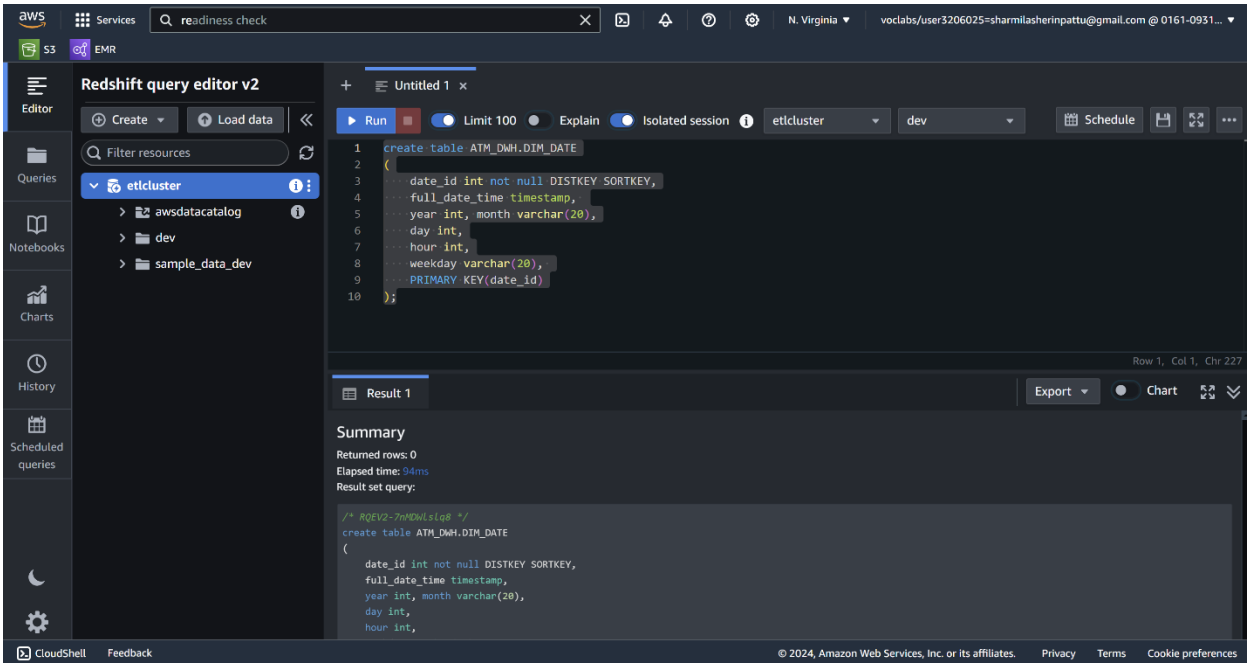
```
create table ATM_DWH.DIM_ATM
(
atm_id int not null DISTKEY SORTKEY,
atm_number varchar(20),
atm_manufacturer varchar(50),
atm_location_id int,
PRIMARY KEY (atm_id),
FOREIGN KEY (atm_location_id) references ATM_DWH.DIM_LOCATION(location_id)
);
```



Create DIM_DATE on Redshift:

Query:

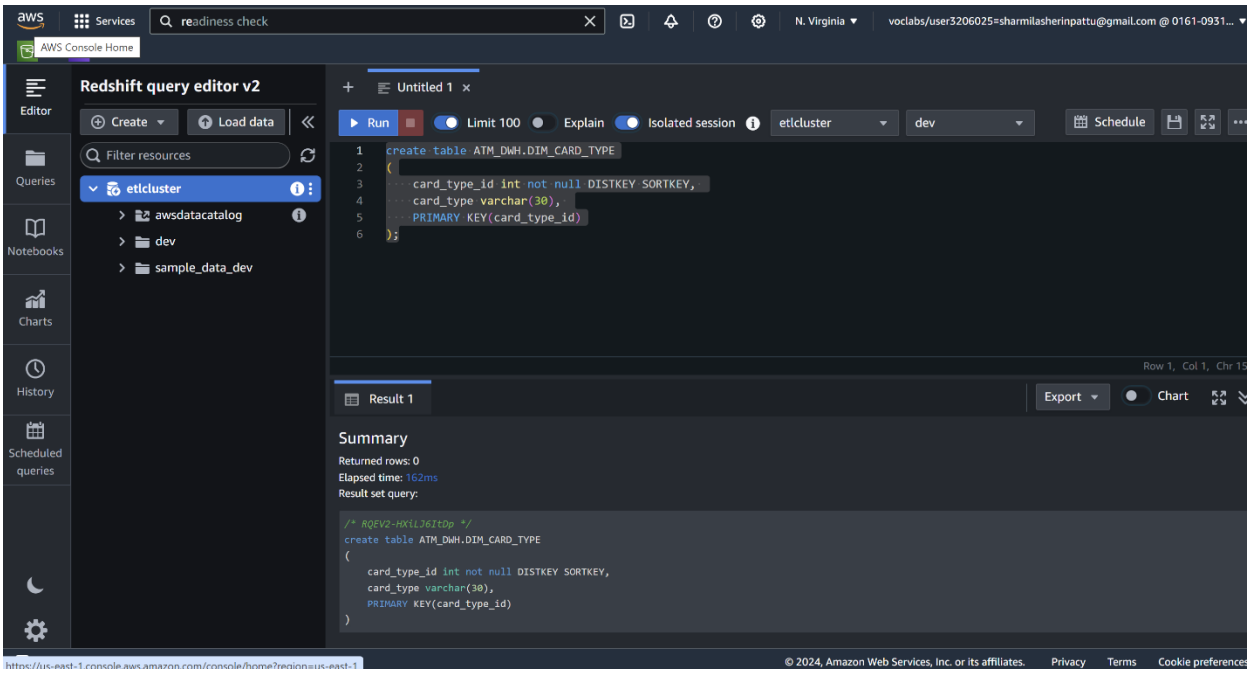
```
create table ATM_DWH.DIM_DATE
(
date_id int not null DISTKEY SORTKEY,
full_date_time timestamp,
year int,
month varchar(20),day int,hour int,weekday varchar(20),
PRIMARY KEY(date_id));
```



Create DIM_CARD_TYPE on Redshift:

Query:

```
create table ATM_DWH.DIM_CARD_TYPE
(
card_type_id int not null DISTKEY SORTKEY,
card_type varchar(30),
PRIMARY KEY(card_type_id)
);
```

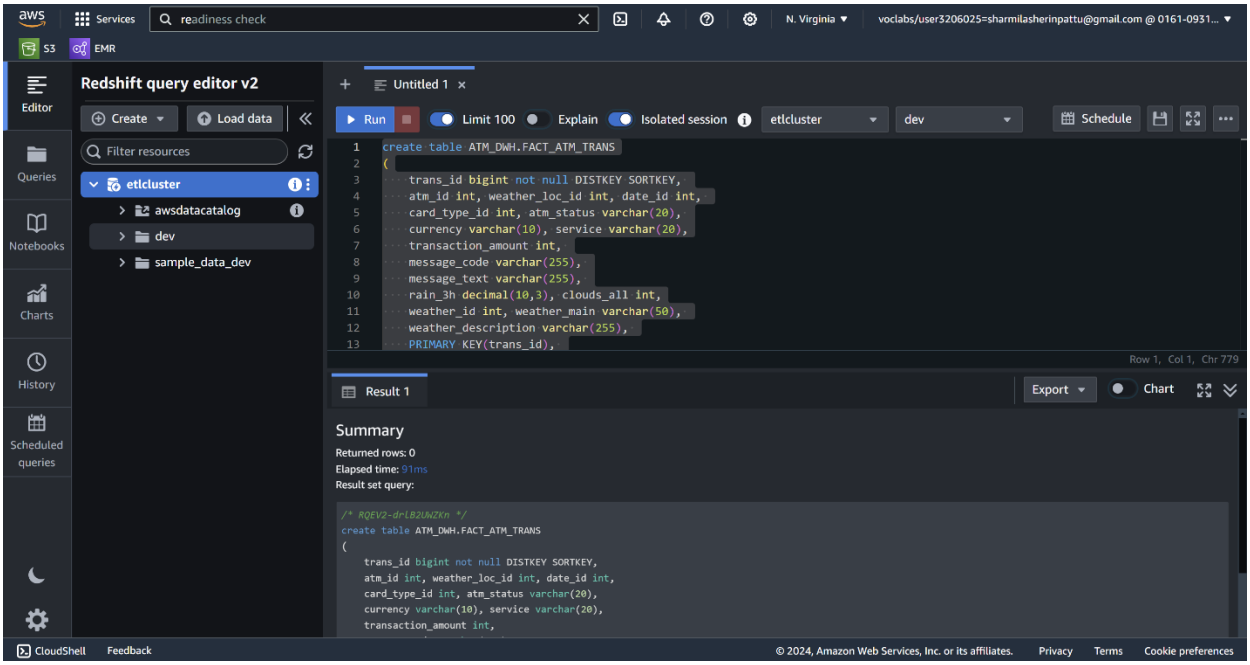


Create FACT_ATM_TRANS on Redshift:

Query:

```
create table ATM_DWH.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(255),
message_text varchar(255),
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 ATM_DWH.DIM_LOCATION(location_id),
FOREIGN KEY(atm_id) references ATM_DWH.DIM_ATM(atm_id),
FOREIGN KEY(date_id) references ATM_DWH.DIM_DATE(date_id),
FOREIGN KEY(card_type_id) references ATM_DWH.DIM_CARD_TYPE(card_type_id)
);

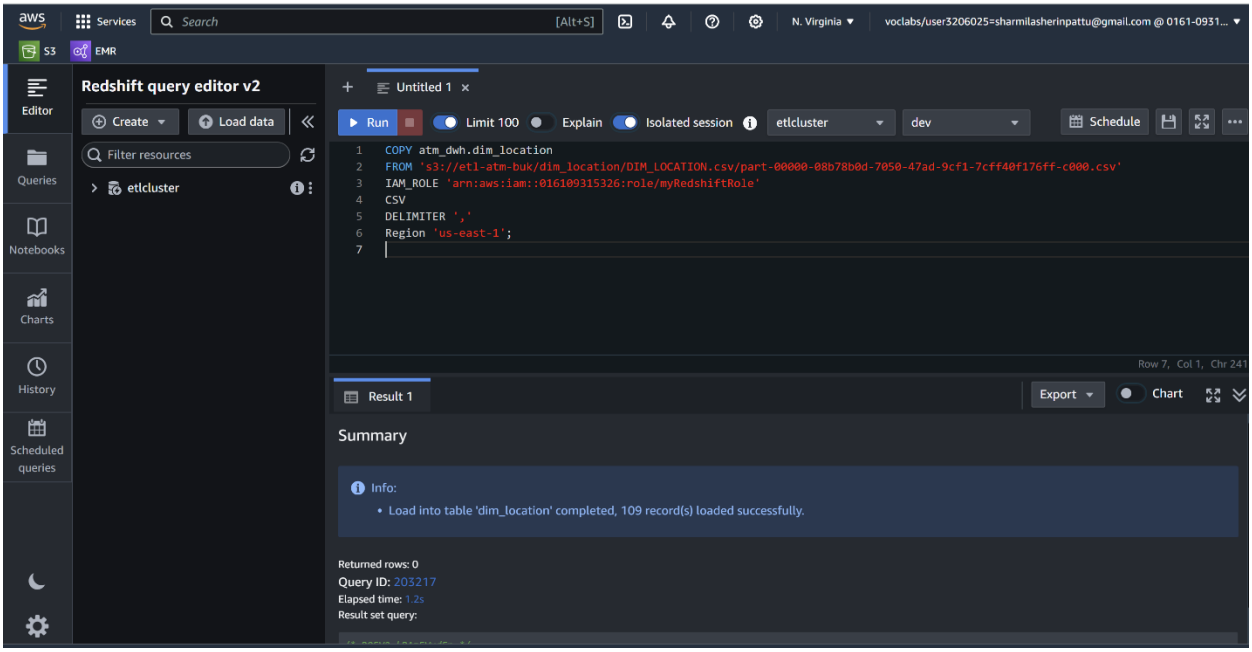


Queries to copy the data from S3 buckets to the Redshift cluster in the appropriate tables

• Load Data to DIM_LOCATION:

Query:

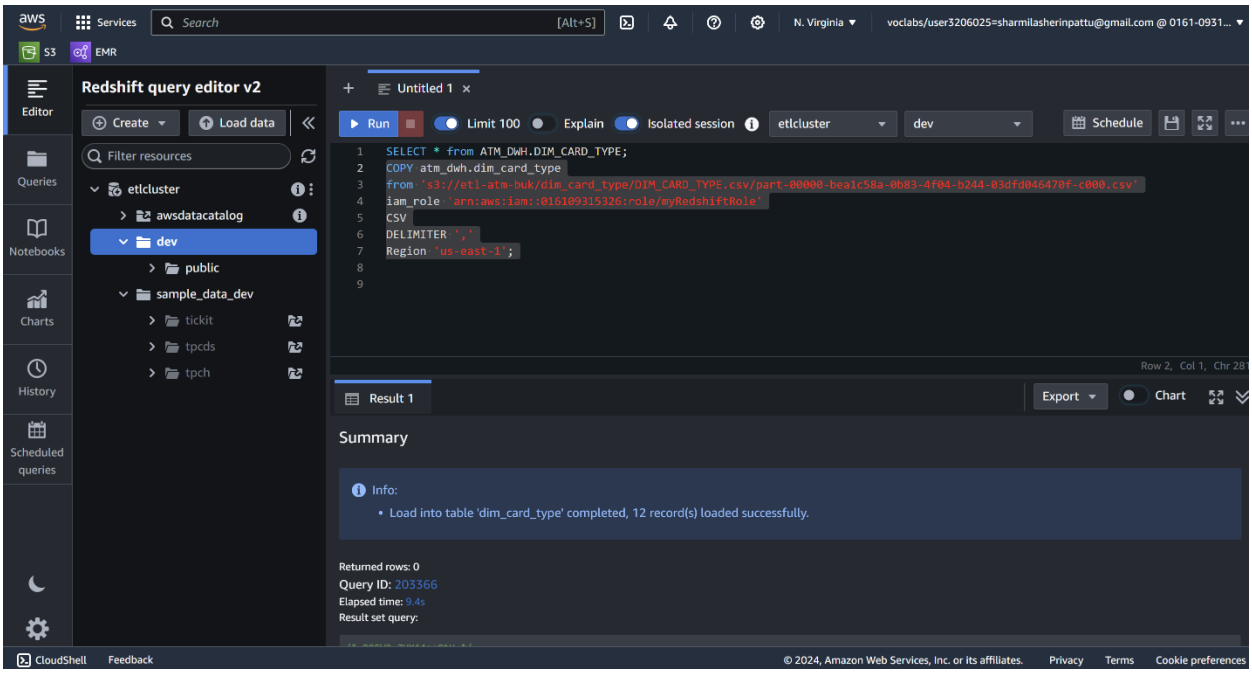
COPY atm_dwh.dim_location
from 's3://etl-atm-buk/dim_location/DIM_LOCATION.csv/part-00000-08b78b0d-7050-47ad-9cf1-7cff40f176ff-c000.csv'
iam_role 'arn:aws:iam::016109315326:role/myRedshiftRole'
CSV
DELIMITER ','
Region 'us-east-1';



Load Data to DIM_CARD_TYPE:

Query:

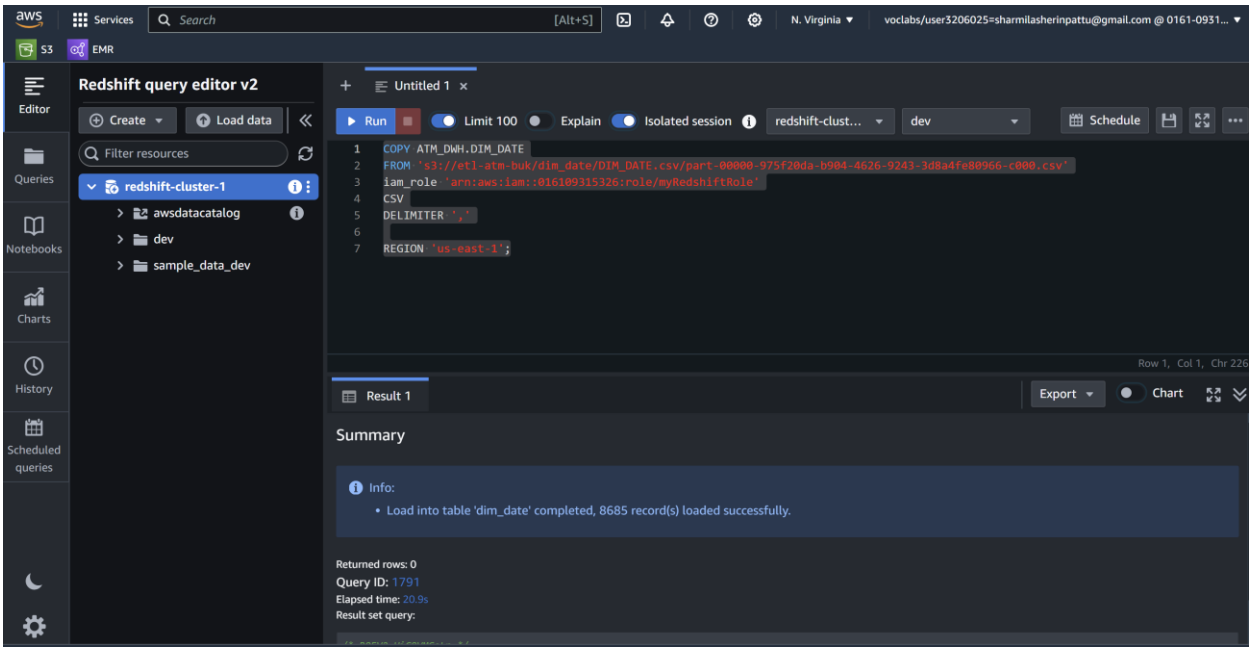
```
COPY atm_dwh.dim_card_type
from 's3://etl-atm-buk/dim_card_type/DIM_CARD_TYPE.csv/part-00000-bea1c58a-0b83-4f04-b244-03dfd046470f-c000.csv'
iam_role 'arn:aws:iam::016109315326:role/myRedshiftRole'
CSV
DELIMITER ','
Region 'us-east-1';
```



Load Data to DIM_DATE:

Query:

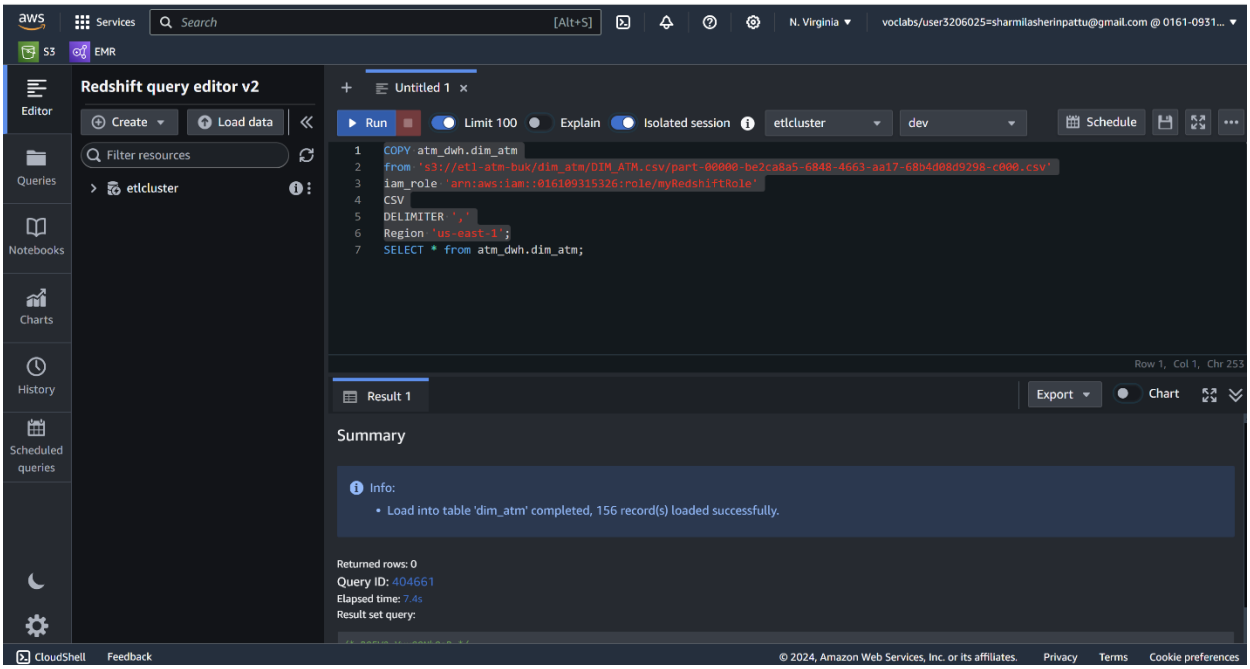
```
COPY ATM_DWH.DIM_DATE
FROM 's3://etl-atm-buk/dim_date/DIM_DATE.csv/part-00000-975f20da-b904-4626-9243-3d8a4fe80966-c000.csv'
iam_role 'arn:aws:iam::016109315326:role/myRedshiftRole'
CSV
DELIMITER ','
REGION 'us-east-1';
```



Load Data to DIM_ATM

Query:

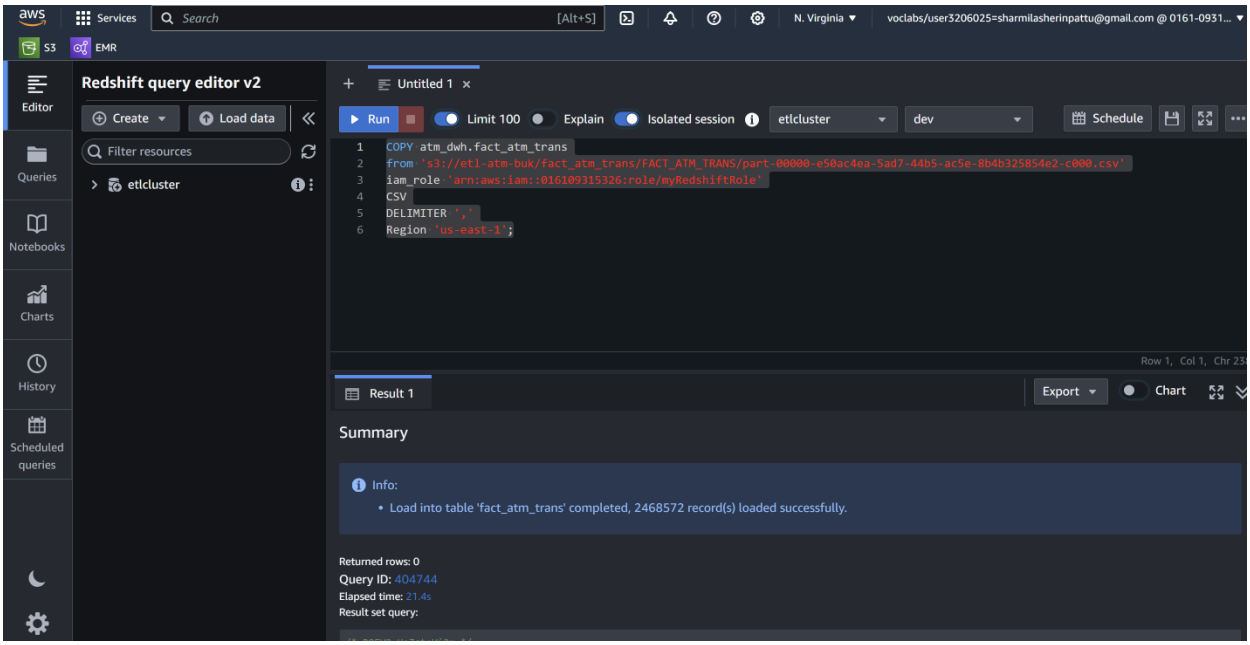
```
COPY atm_dwh.dim_atm
from 's3://etl-atm-buk/dim_atm/DIM_ATM.csv/part-00000-be2ca8a5-6848-4663-aa17-68b4d08d9298-c000.csv'
iam_role 'arn:aws:iam::016109315326:role/myRedshiftRole'
CSV
DELIMITER ','
Region 'us-east-1';
```



Load Data to FACT_ATM_TRANS:

Query:

```
COPY atm_dwh.fact_atm_trans
from 's3://etl-atm-buk/fact_atm_trans/FACT_ATM_TRANS/part-00000-e50ac4ea-5ad7-44b5-ac5e-8b4b325854e2.csv'
iam_role 'arn:aws:iam::016109315326:role/myRedshiftRole'
CSV
DELIMITER ','
Region 'us-east-1';
```


aws
Services
Search
[Alt+S]
N. Virginia
voclabs/user3206025=sharmilasherinpattu@gmail.com @ 0161-0931...
S3
EMR
Redshift query editor v2
Editor
Queries
Notebooks
Charts
History
Scheduled queries
Create
Load data
Filter resources
etlcluster
Untitled 1
Run
Limit 100
Explain
Isolated session
etlcluster
dev
Schedule
1 COPY atm_dwh.fact_atm_trans
2 from 's3://etl-atm-buk/fact_atm_trans/FACT_ATM_TRANS/part-00000-e50ac4ea-5ad7-44b5-ac5e-8b4b325854e2-c000.csv'
3 iam_role 'arn:aws:iam::016109315326:role/myRedshiftRole'
4 CSV
5 DELIMITER ','
6 Region 'us-east-1';
Row 1, Col 1, Chr 23
Result 1
Export
Chart
Summary
Info:
• Load into table 'fact_atm_trans' completed, 2468572 record(s) loaded successfully.
Returned rows: 0
Query ID: 404744
Elapsed time: 21.4s
Result set query: