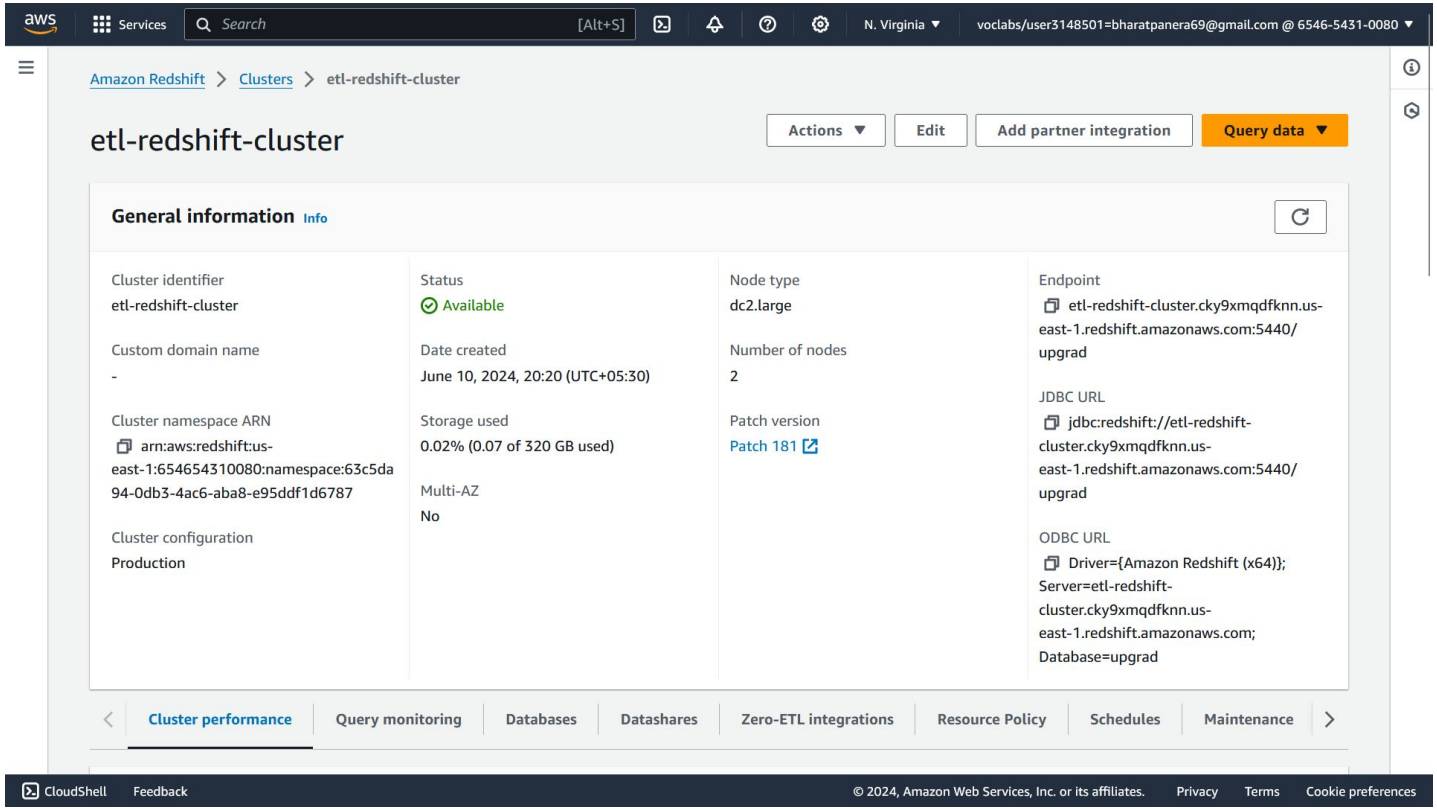
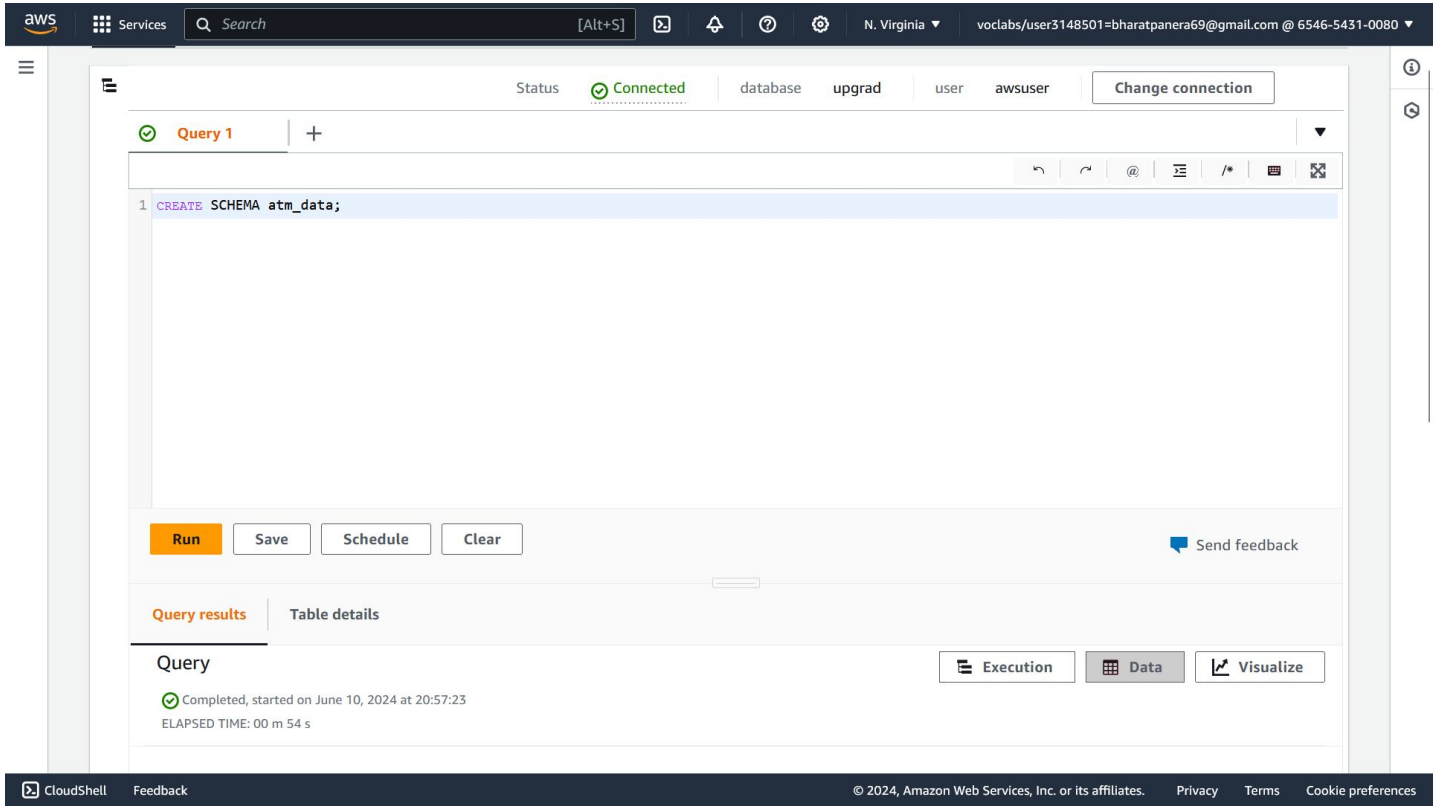
Redshift Setup

Redshift cluster creation



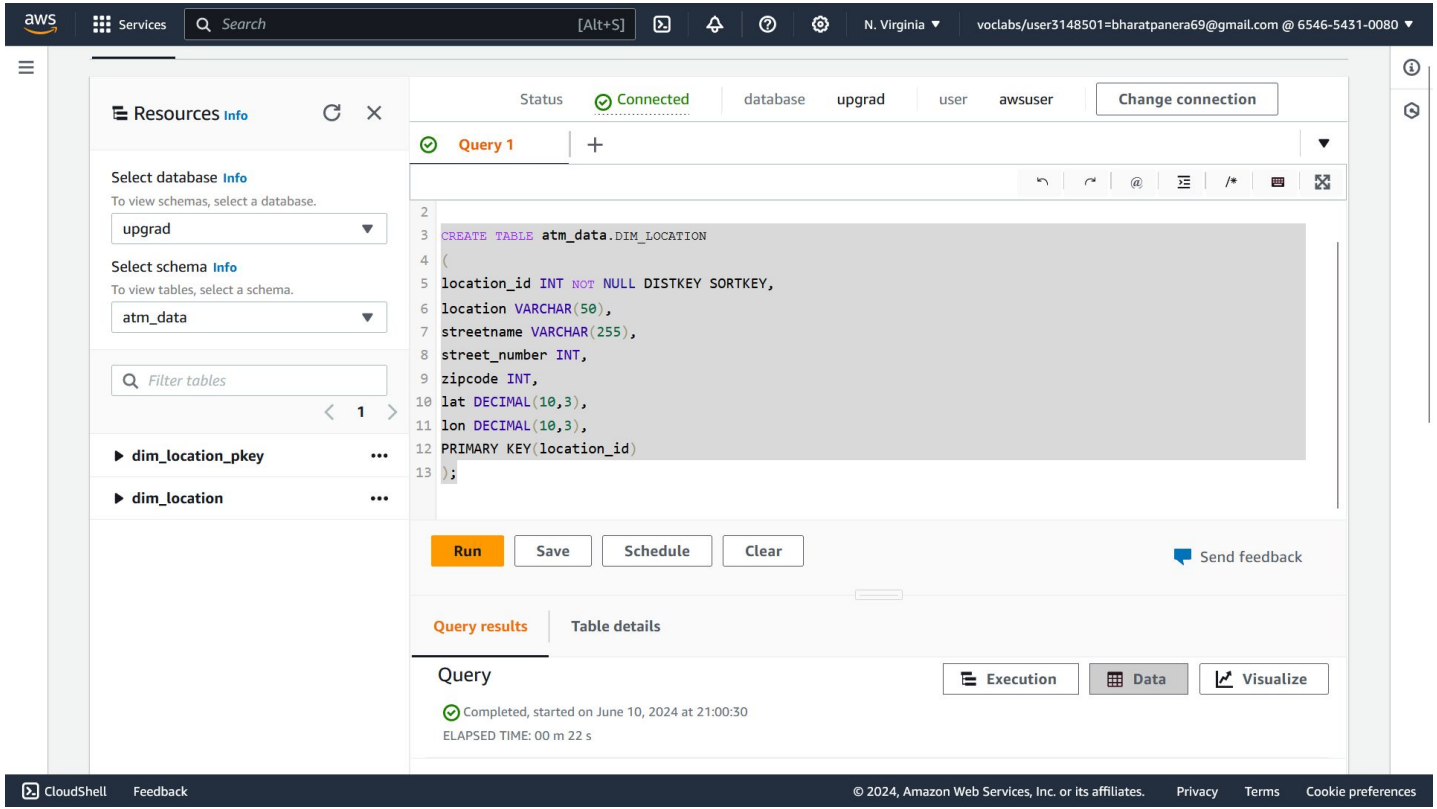
Create schema



Create dimension table - DIM_LOCATION

```
CREATE TABLE 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)
);
```

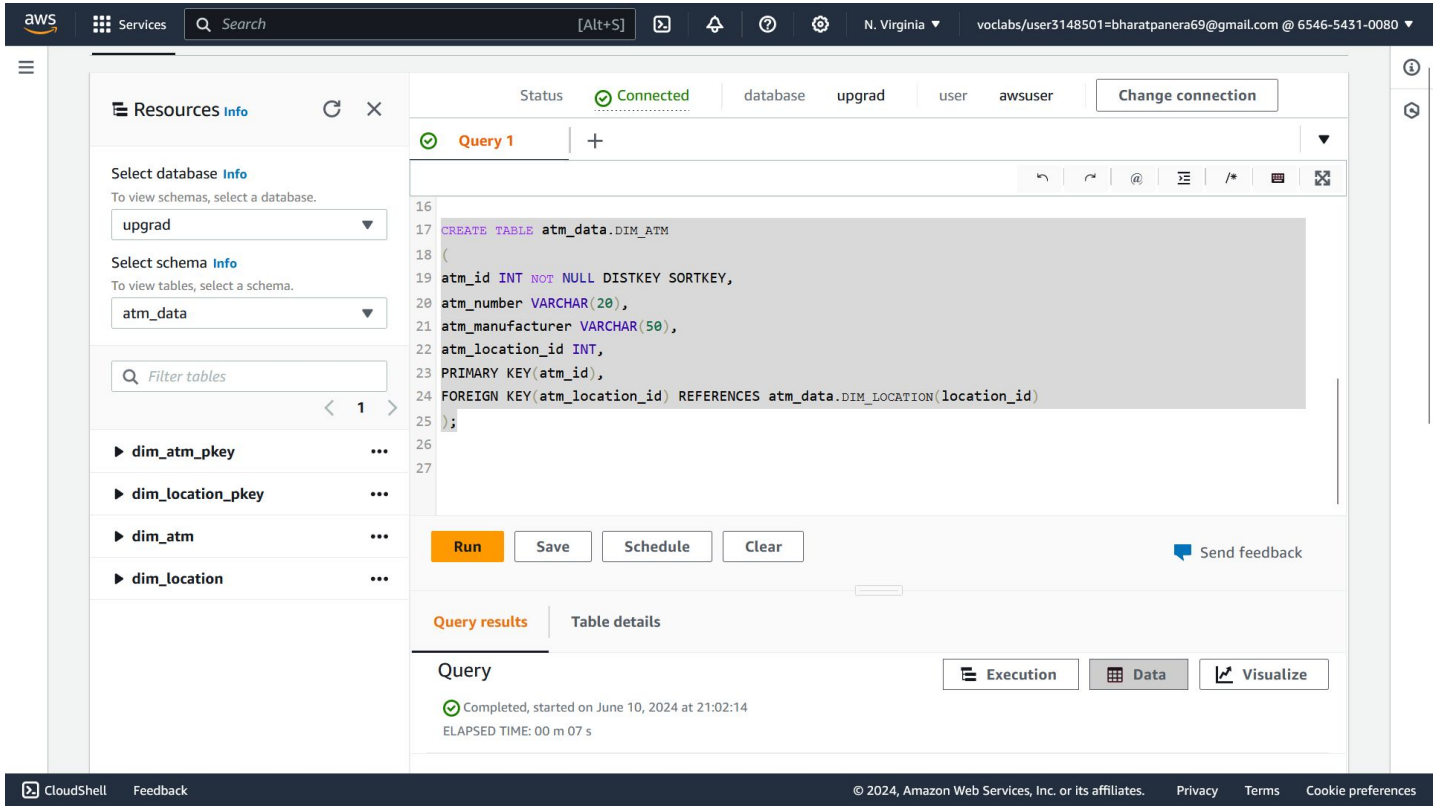
Screenshot: Create dimension table - DIM_LOCATION



Create dimension table - DIM_ATM

```
CREATE TABLE 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 atm_data.DIM_LOCATION(location_id)
);
```

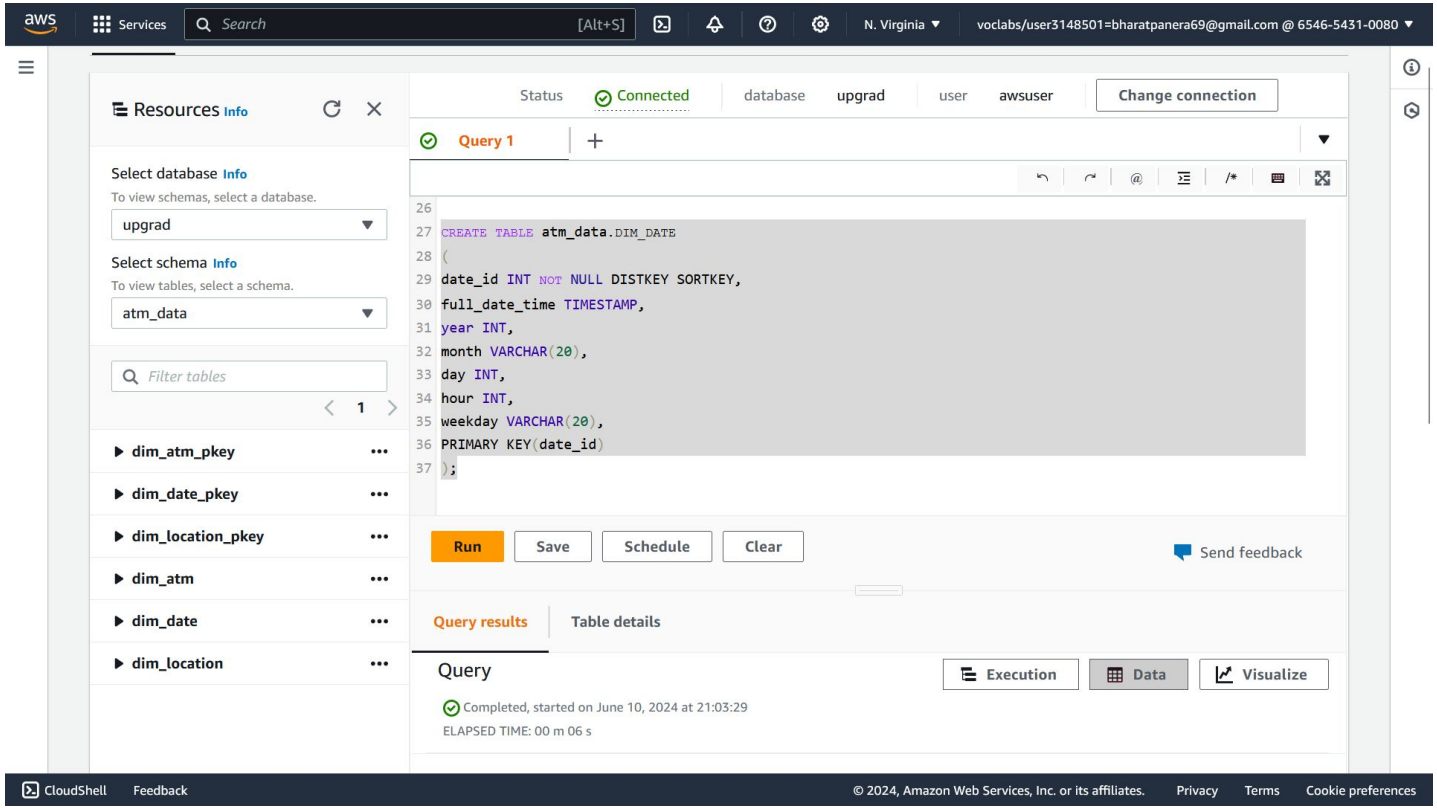
Screenshot: Create dimension table - DIM_ATM



Create dimension table - DIM_DATE

```
CREATE TABLE 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)
);
```

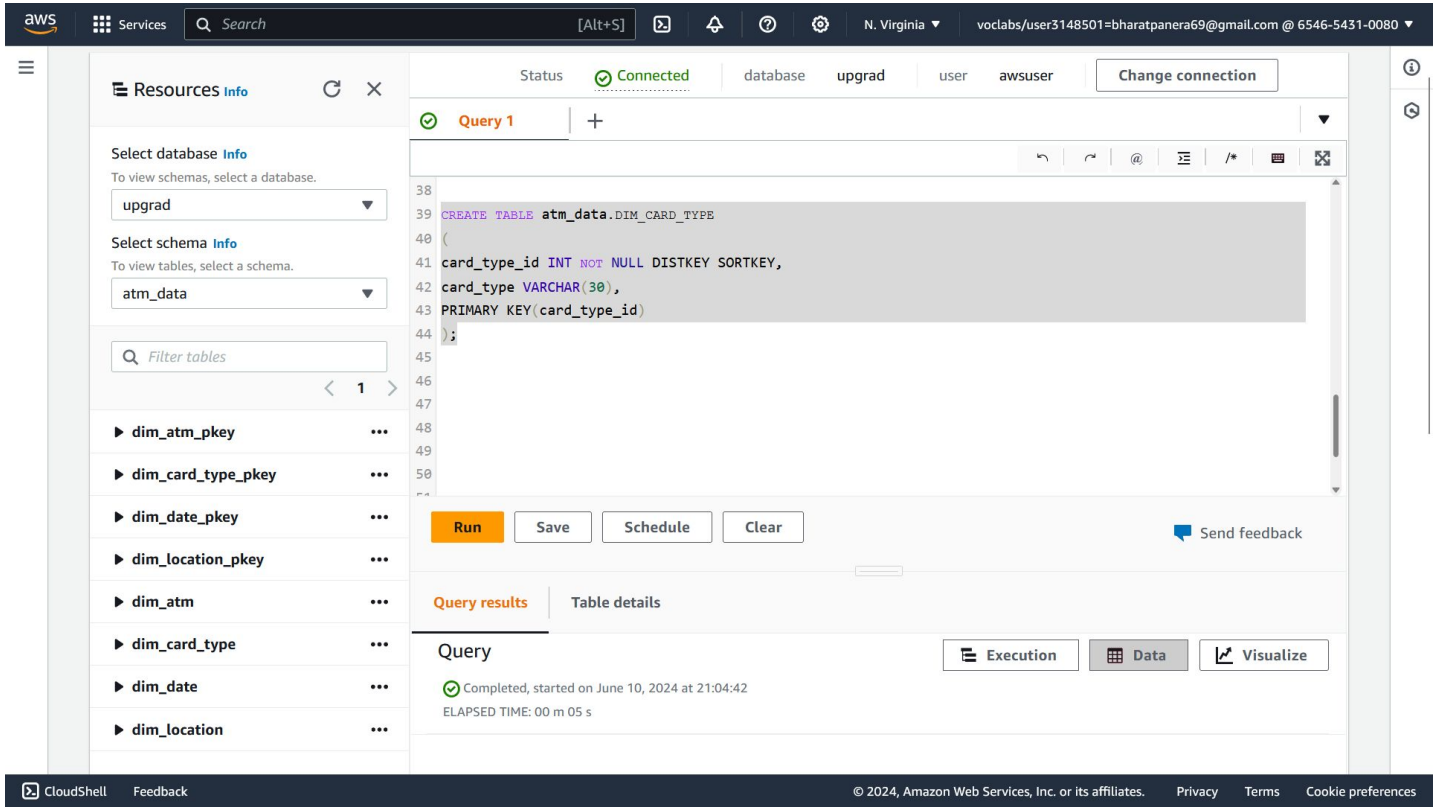
Screenshot: Create dimension table - DIM_DATE



Create dimension table - DIM_CARD_TYPE

```
CREATE TABLE atm_data.DIM_CARD_TYPE
(
card_type_id INT NOT NULL DISTKEY SORTKEY,
card_type VARCHAR(30),
PRIMARY KEY(card_type_id)
);
```

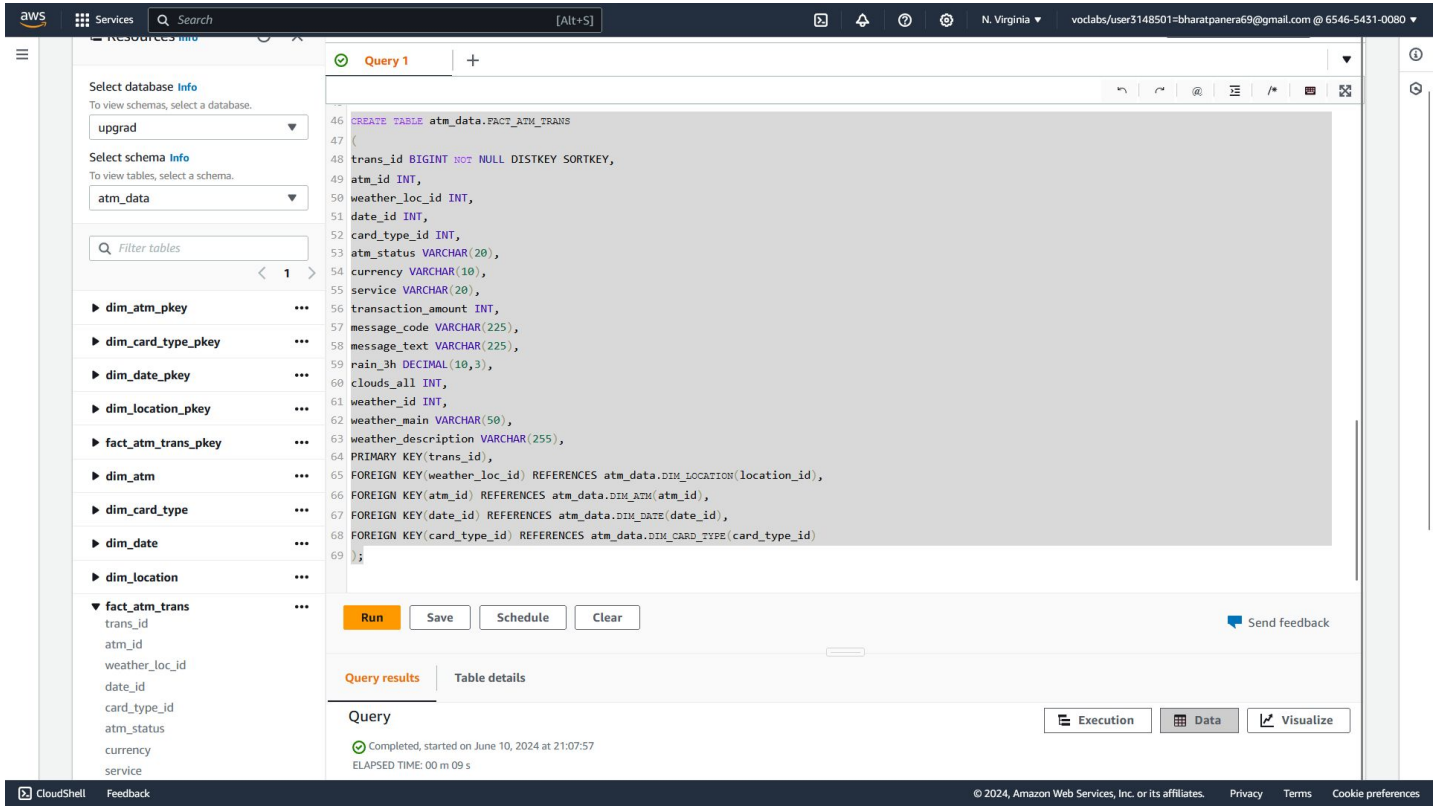
Screenshot: Create dimension table - DIM_CARD_TYPE



Create Fact table - FACT_ATM_TRANS

```
CREATE TABLE 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 atm_data.DIM_LOCATION(location_id),
FOREIGN KEY(atm_id) REFERENCES atm_data.DIM_ATM(atm_id),
FOREIGN KEY(date_id) REFERENCES atm_data.DIM_DATE(date_id),
FOREIGN KEY(card_type_id) REFERENCES atm_data.DIM_CARD_TYPE(card_type_id)
);
```

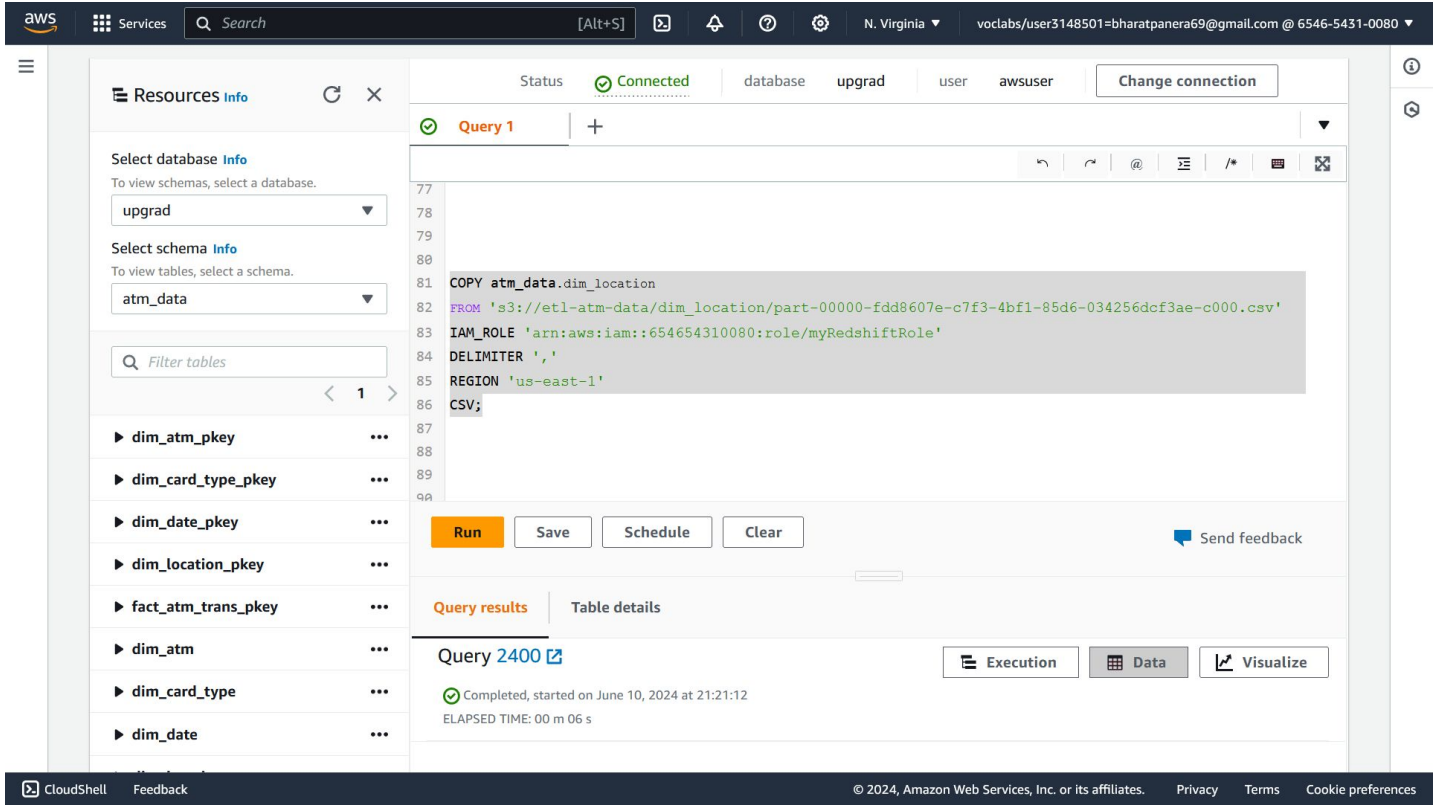
Create Fact table - FACT_ATM_TRANS



Load data into a Redshift cluster from AWS S3 bucket

```
COPY atm_data.dim_location
FROM 's3://etl-atm-data/dim_location/part-00000-fdd8607e-c7f3-4bf1-85d6-034256dcf3ae-c000.csv'
IAM_ROLE 'arn:aws:iam::654654310080:role/myRedshiftRole'
DELIMITER ','
REGION 'us-east-1'
CSV;
```

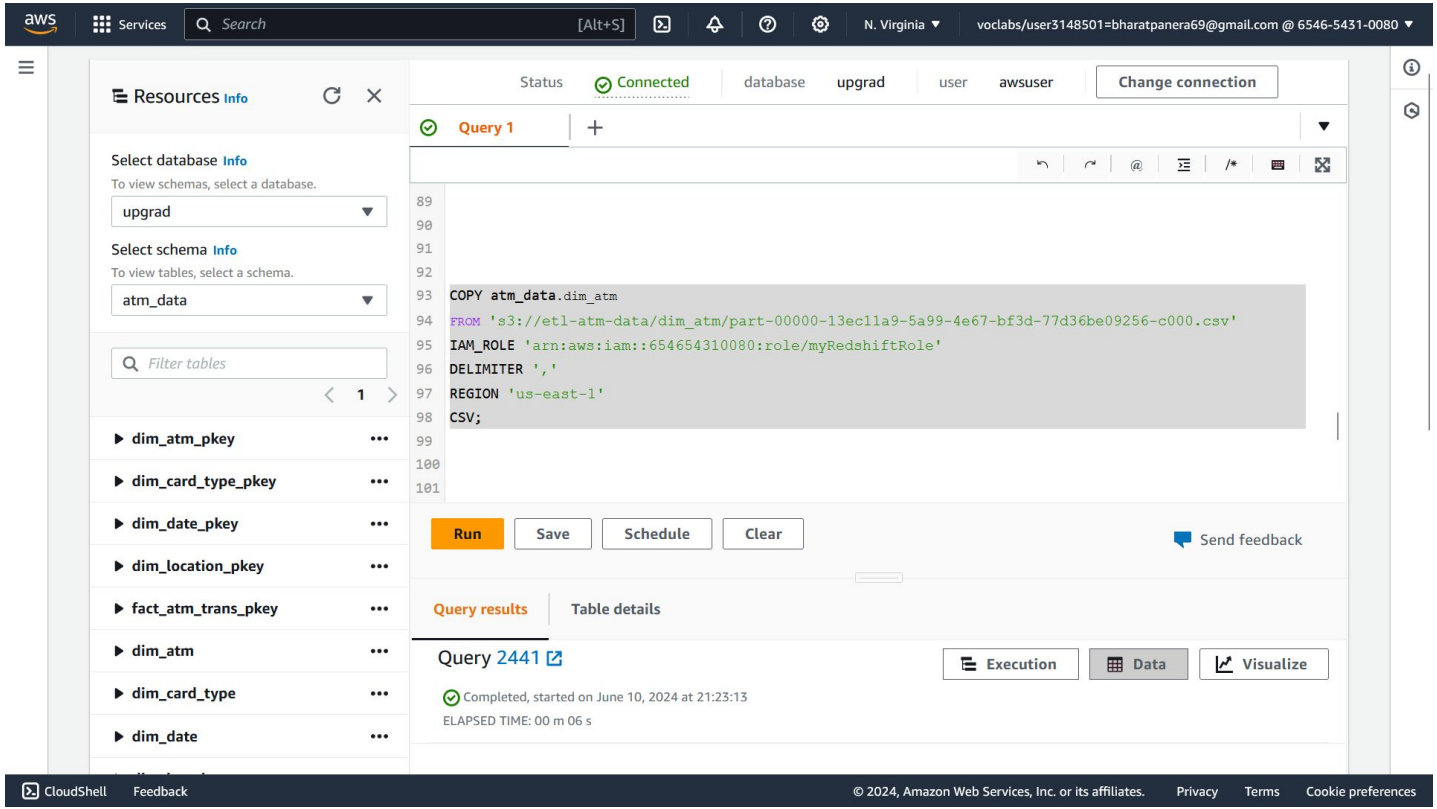
Copy the data to table - dim_location



Copy the data to table - dim_atm

```
COPY atm_data.dim_atm
FROM 's3://etl-atm-data/dim_atm/part-00000-13ec11a9-5a99-4e67-bf3d-77d36be09256-c000.csv'
IAM_ROLE 'arn:aws:iam::654654310080:role/myRedshiftRole'
DELIMITER ','
REGION 'us-east-1'
CSV;
```

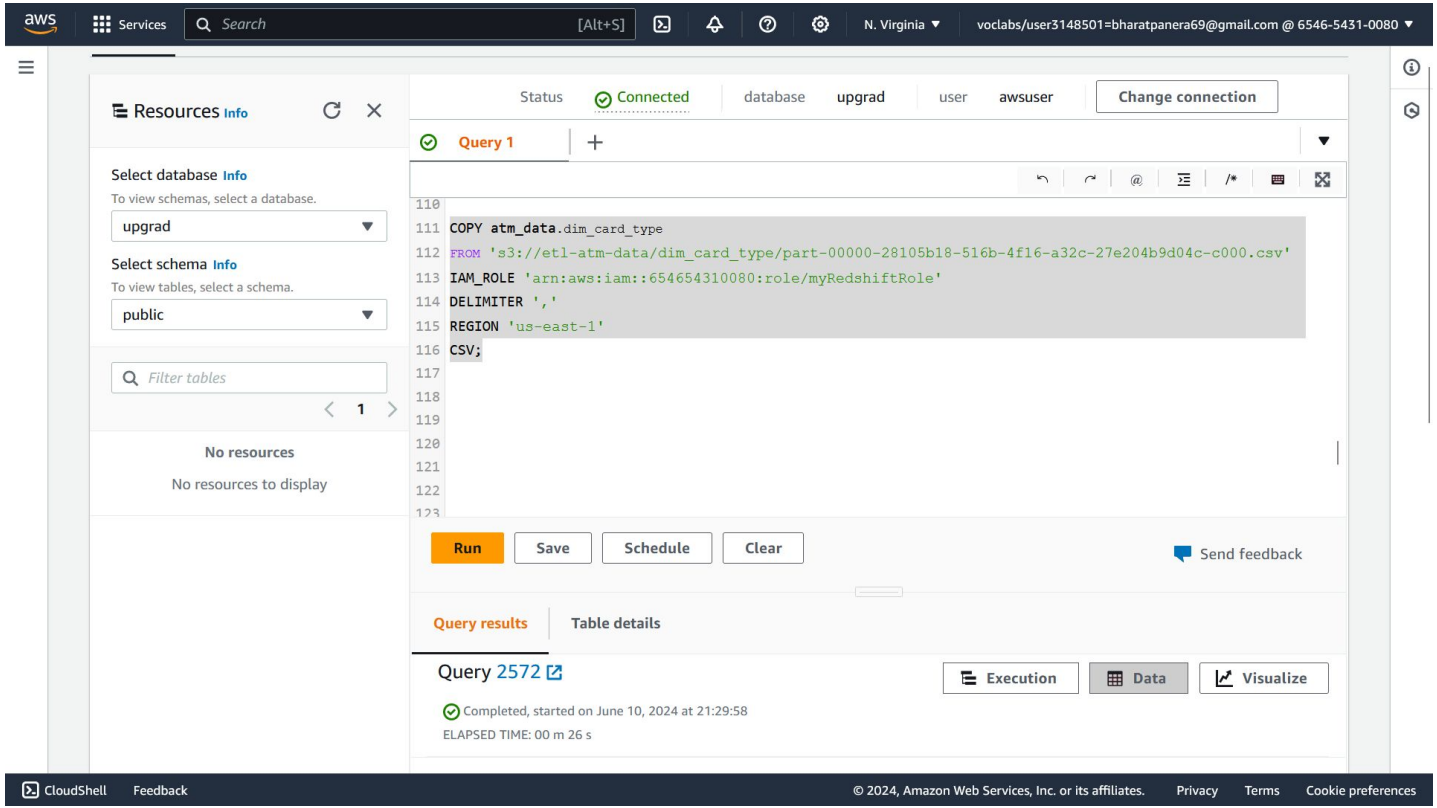
Copy the data to table - dim_atm



Copy the data to table - dim_card_type

```
COPY atm_data.dim_card_type
FROM 's3://etl-atm-data/dim_card_type/part-00000-28105b18-516b-4f16-a32c-27e204b9d04c-c000.csv'
IAM_ROLE 'arn:aws:iam::654654310080:role/myRedshiftRole'
DELIMITER ','
REGION 'us-east-1'
CSV;
```

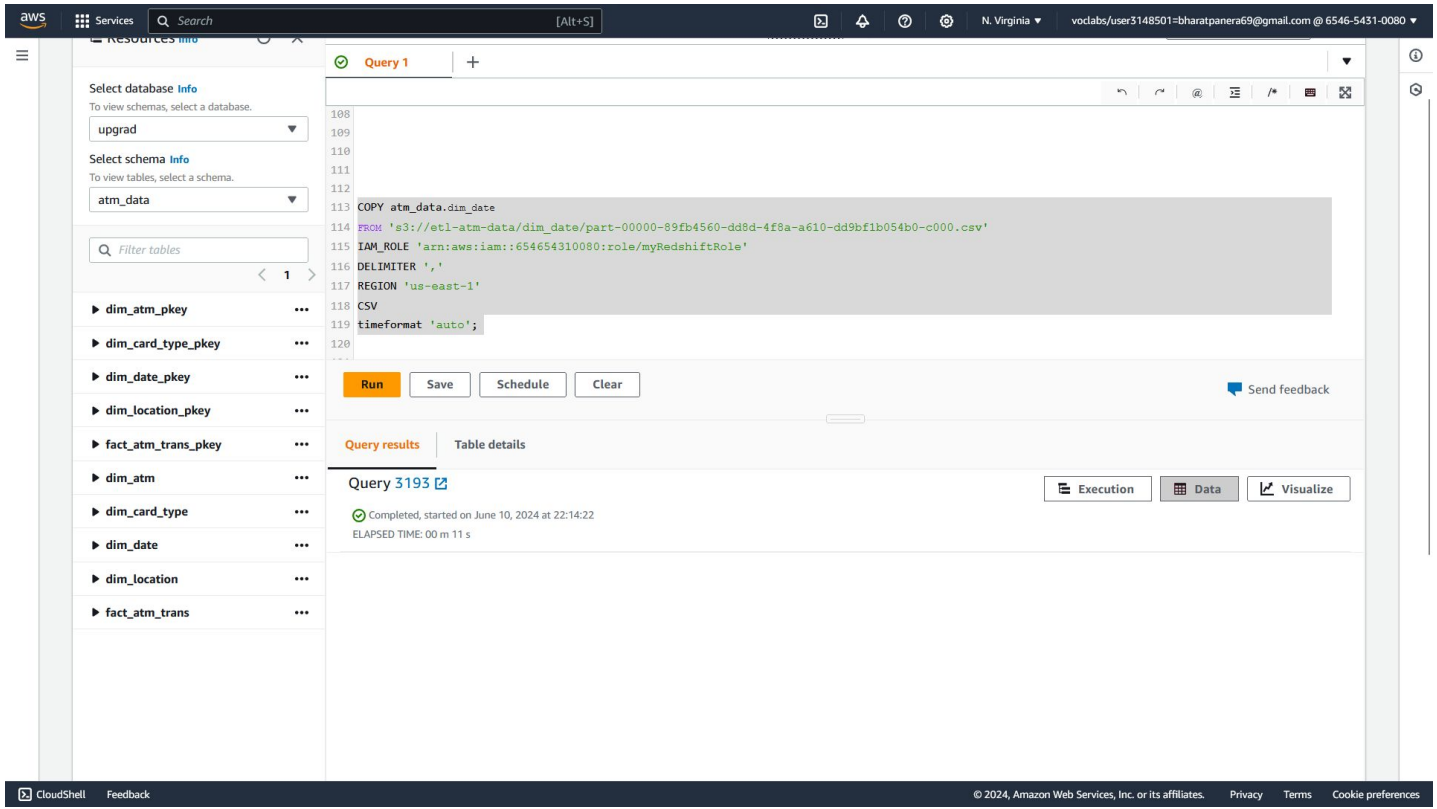
Copy the data to table - dim_card_type



Copy the data to table - dim_date

```
COPY atm_data.dim_date
FROM 's3://etl-atm-data/dim_date/part-00000-89fb4560-dd8d-4f8a-a610-dd9bf1b054b0-c000.csv'
IAM_ROLE 'arn:aws:iam::654654310080:role/myRedshiftRole'
DELIMITER ','
REGION 'us-east-1'
CSV
timeformat 'auto';
```

Copy the data to table - dim_date



Copy the data to fact table - fact_atm_trans

```
COPY atm_data.fact_atm_trans
FROM 's3://etl-atm-data/fact_atm_trans/part-00000-2f09b28c-0ba5-493c-9c7b-e778ea20bae6-c000.csv'
IAM_ROLE 'arn:aws:iam::654654310080:role/myRedshiftRole'
DELIMITER ','
REGION 'us-east-1'
CSV;
```

Copy the data to fact table - fact_atm_trans