Creation Of a Redshift Cluster
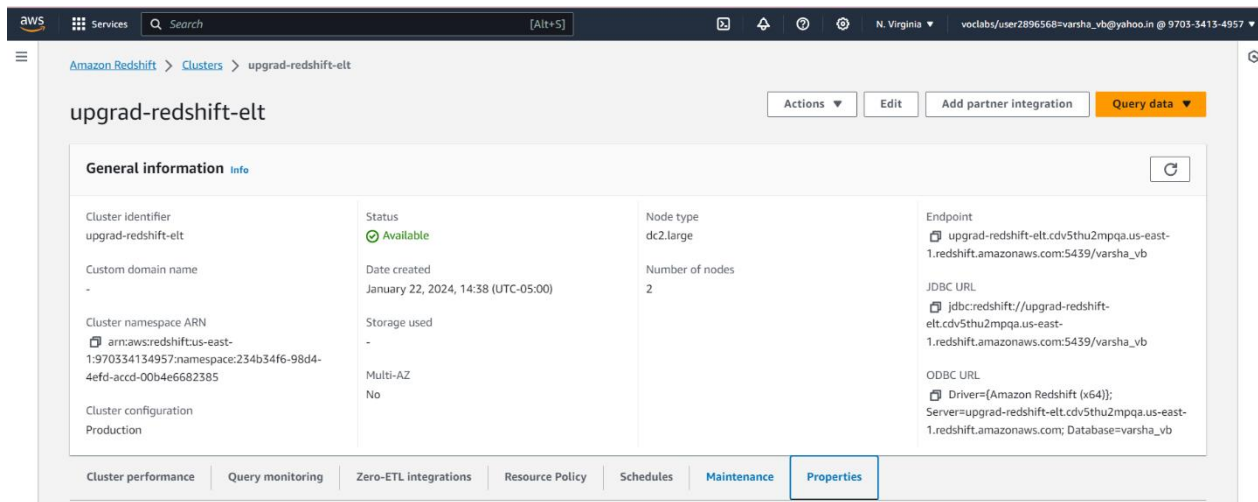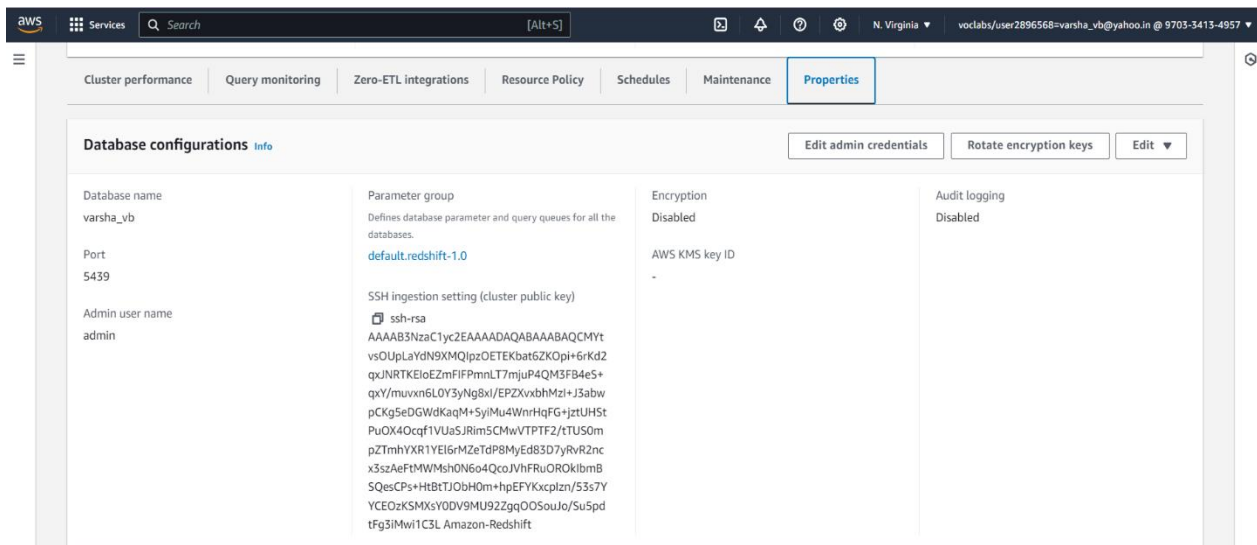
Screenshots of the configuration of the Redshift cluster that you have created:

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:

-- Create schema

```
CREATE SCHEMA atm_data;
```

-- Create 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)
);
```

-- Create 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)
);
```

```
-- Create 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)
);
```

```
-- Create 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)
);
```

```
-- Create 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));
```
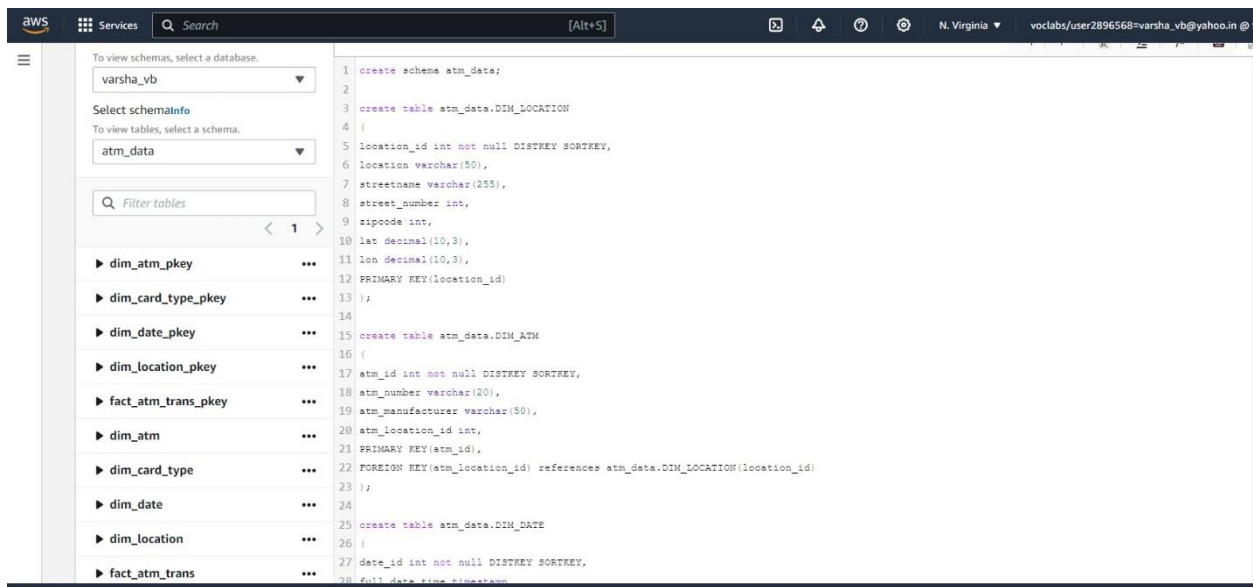

Loading data into a Redshift cluster from Amazon S3 bucket

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

```
copy atm_data.dim_location from 's3://s3bucket4upgradredshift/ETL-Upgrad/DIM_LOCATION/'
iam_role 'arn:aws:iam::970334134957:role/myRedshiftRole'
delimiter ',' region 'us-east-1'
CSV;

copy atm_data.dim_atm from 's3://s3bucket4upgradredshift/ETL-Upgrad/DIM_ATM/'
iam_role 'arn:aws:iam::970334134957:role/myRedshiftRole'
delimiter ',' region 'us-east-1'
CSV;


copy atm_data.dim_date from 's3://s3bucket4upgradredshift/ETL-Upgrad/DIM_DATE/'
iam_role 'arn:aws:iam::970334134957:role/myRedshiftRole'
delimiter ',' region 'us-east-1'
CSV;

copy atm_data.dim_card_type from 's3://s3bucket4upgradredshift/ETL-Upgrad/DIM_CARD/'
iam_role 'arn:aws:iam::970334134957:role/myRedshiftRole'
delimiter ',' region 'us-east-1'
CSV;

copy atm_data.FACT_ATM_TRANS from 's3://s3bucket4upgradredshift/ETL-
Upgrad/FACT_ATM_TRANS/'
iam_role 'arn:aws:iam::970334134957:role/myRedshiftRole'
delimiter ',' region 'us-east-1'
CSV;
```