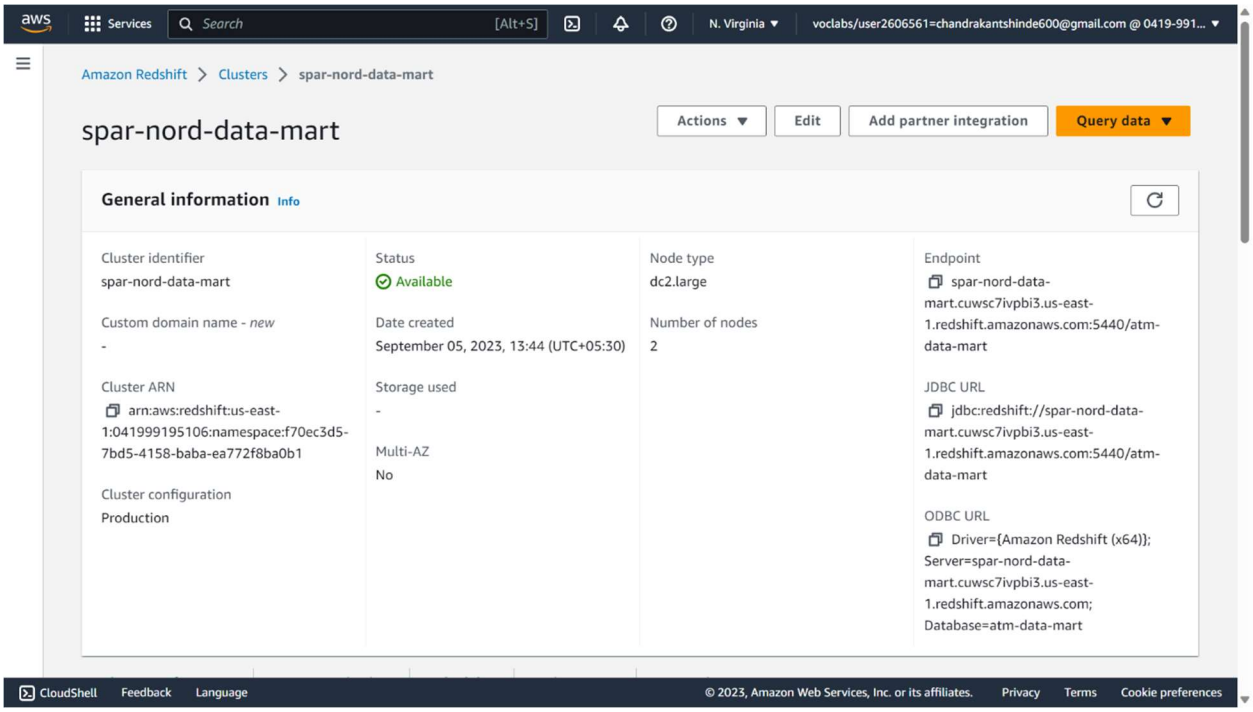
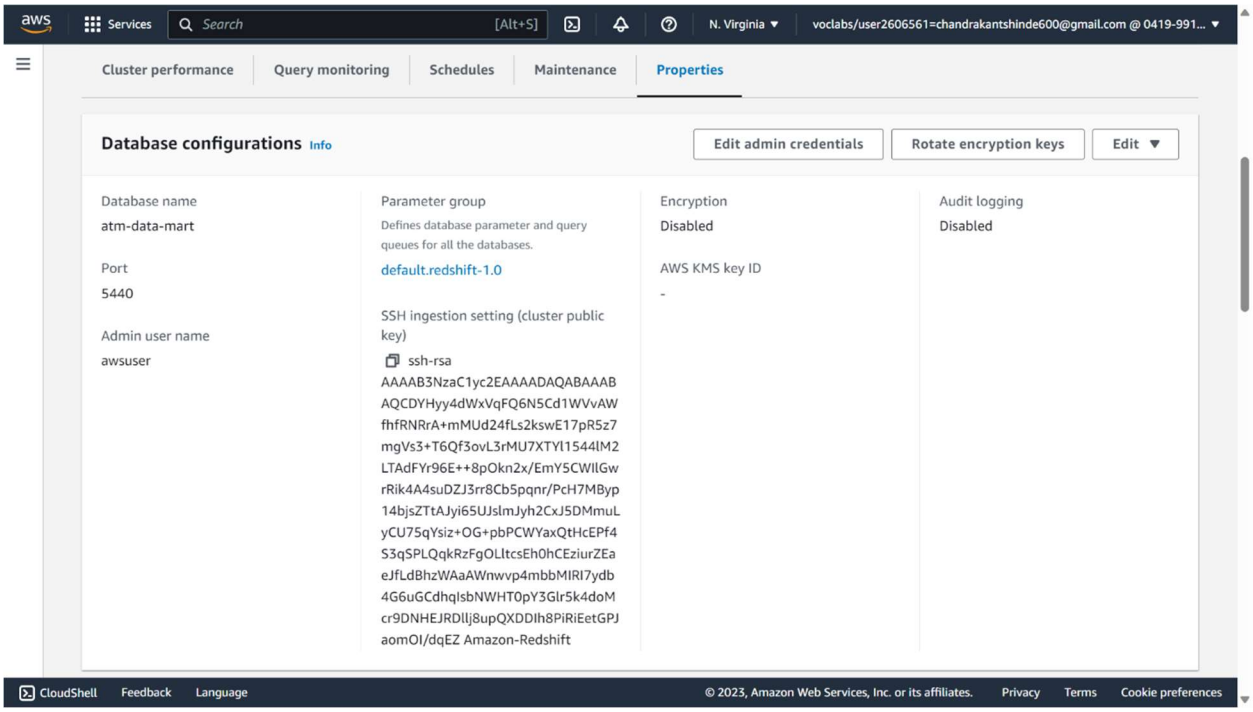
Creation of a Redshift Cluster

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:

<Queries>

```
create schema atm_data;

create table if not exists 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 if not exists 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 if not exists 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 if not exists atm_data.DIM_CARD_TYPE
(
card_type_id int not null DISTKEY SORTKEY,
card_type varchar(30),
PRIMARY KEY(card_type_id)
);

create table if not exists 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

<Queries>

```
copy atm_data.dim_location from 's3://bank-atm-etl/dim_location/part-00000-12ec4699-ef22-
48cc-8164-004231ee5404-c000.csv'
iam_role 'arn:aws:iam::041999195106:role/myRedshiftRole'
delimiter ',' region 'us-east-1'
```

```
CSV;

copy atm_data.dim_atm from 's3://bank-atm-etl/dim_atm/part-00000-b0630db1-ace8-47a3-8e2d-4193e94b59c9-c000.csv'
iam_role 'arn:aws:iam::041999195106:role/myRedshiftRole'
delimiter ',' region 'us-east-1'
CSV;

copy atm_data.dim_date from 's3://bank-atm-etl/dim_date/part-00000-5bdd2bf9-a677-4841-a672-de1b0f762d5d-c000.csv'
iam_role 'arn:aws:iam::041999195106:role/myRedshiftRole'
delimiter ',' region 'us-east-1'
CSV
TIMEFORMAT ‘auto’;

copy atm_data.dim_card_type from 's3://bank-atm-etl/dim_card_type/part-00000-89f8244d-b5f4-4988-9525-cfba36bc683f-c000.csv'
iam_role 'arn:aws:iam::041999195106:role/myRedshiftRole'
delimiter ',' region 'us-east-1'
CSV;

copy atm_data.FACT_ATM_TRANS from 's3://bank-atm-etl/fact_atm_trans/part-00000-06b945fc-9033-4d84-81cb-9f5376c814ac-c000.csv'
iam_role 'arn:aws:iam::041999195106:role/myRedshiftRole'
delimiter ',' region 'us-east-1'
CSV;
```