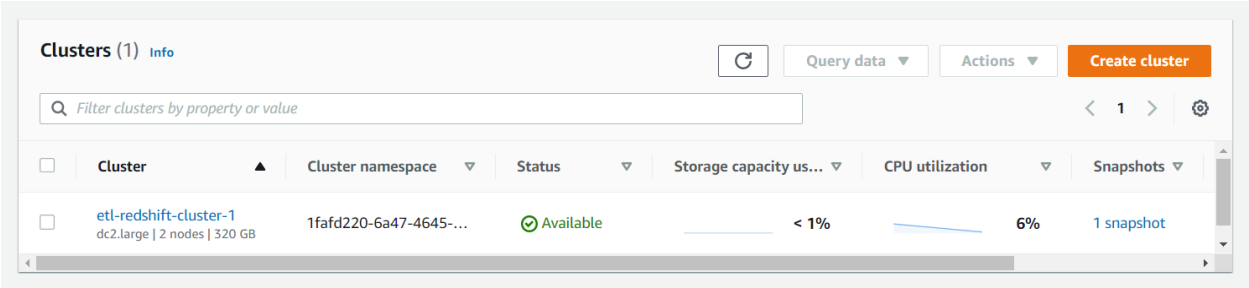
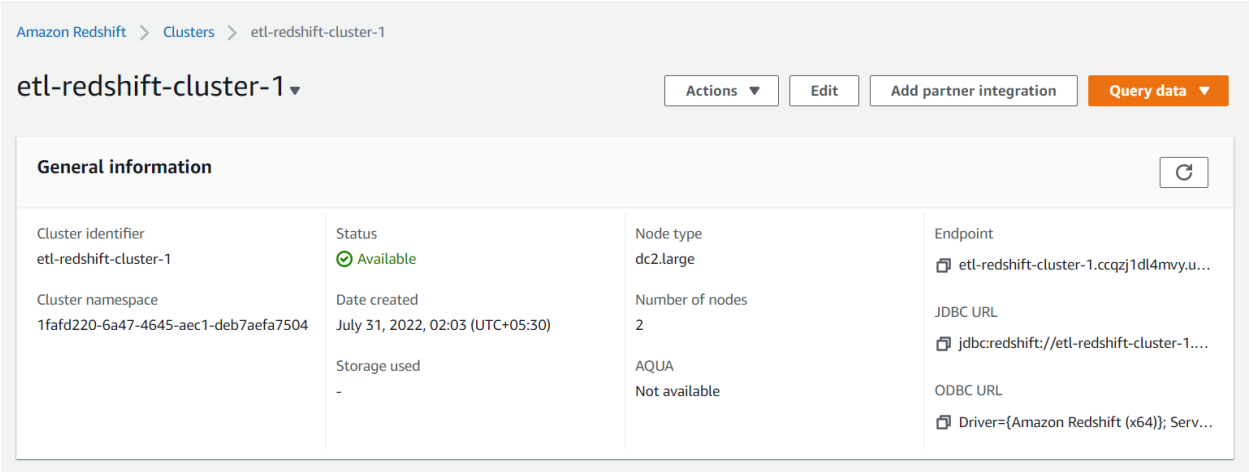
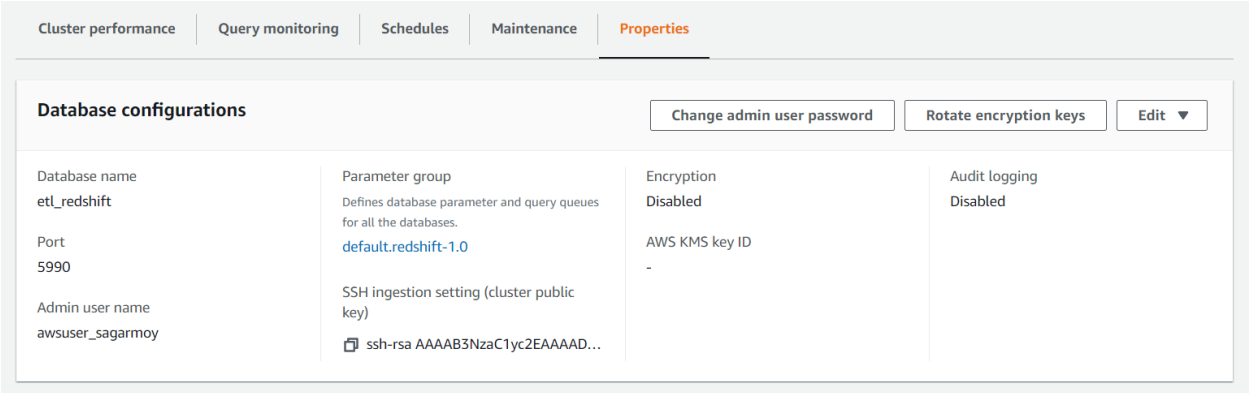
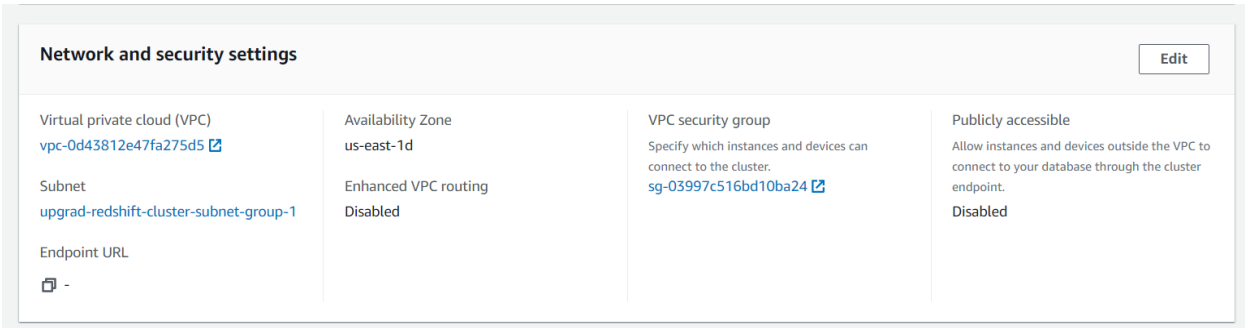
Creation of a Redshift Cluster

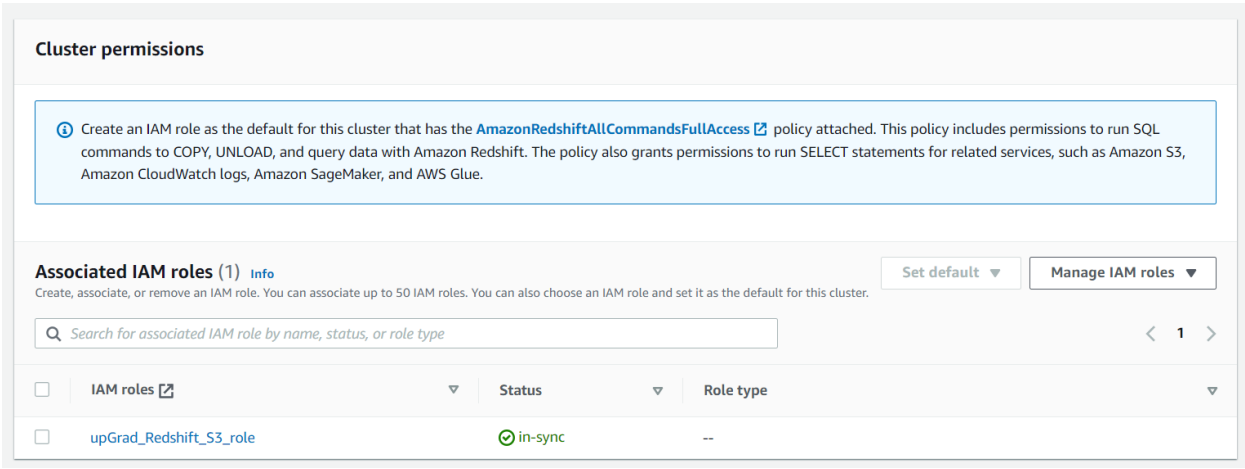
Screenshots of the configuration of the Redshift cluster that you have created:

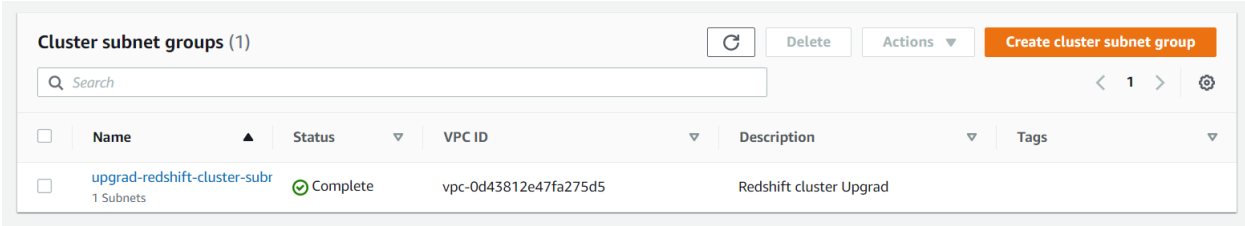


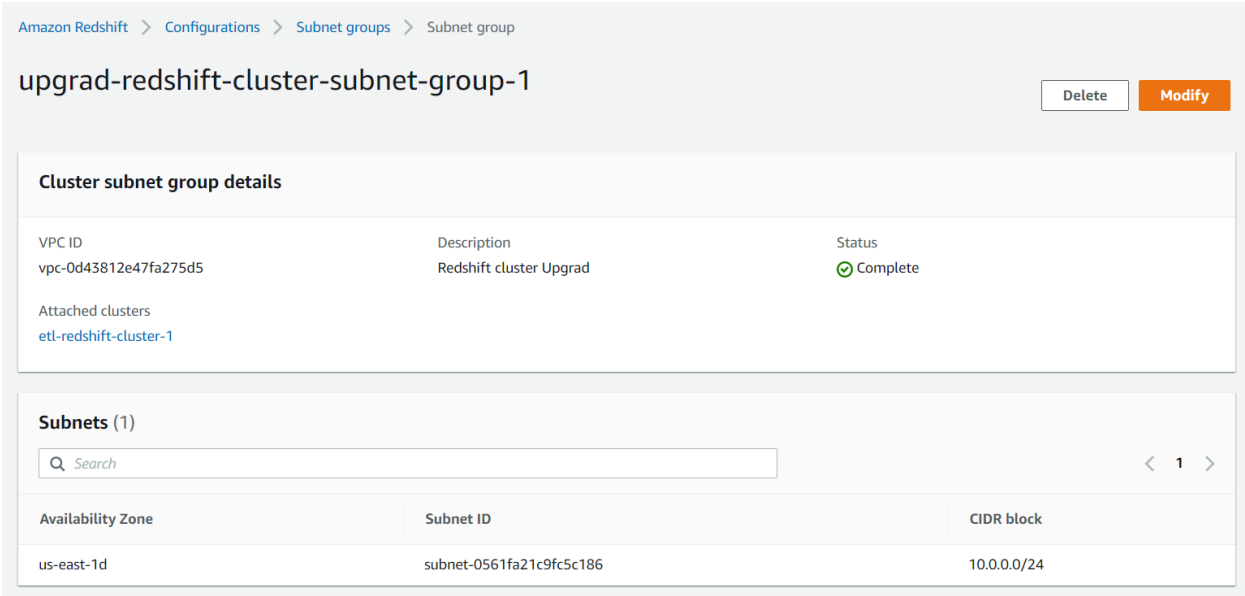












Setting up a database in the Redshift cluster and running queries to create the dimension and fact tables

Queries to create the various dimension and fact tables with appropriate primary and foreign keys:

```
create schema etl_atm;

create table etl_atm.location(
        location_id integer not null,
        location varchar(50),
        streetname varchar(255),
        street_number integer,
        zipcode integer,
        lat numeric(10,3),
        lon numeric(10,3),
        primary key(location_id));

create table etl_atm.atm(
        atm_id integer not null,
        atm_number varchar(20),
        atm_manufacturer varchar(50),
        atm_location_id integer,
        primary key(atm_id),
        foreign key(atm_location_id) references etl_atm.location(location_id));

create table etl_atm.date(
        date_id integer not null,
        full_date_time timestamp,
        year integer,
        month varchar(20),
        day integer,
        hour integer,
        weekDay varchar(20),
        primary key(date_id));

create table etl_atm.card_type(
        card_type_id integer not null,
        card_type varchar(30),
        primary key(card_type_id));
```

```
create table etl_atm.atm_trans(
        trans_id BIGINT not null,
        atm_id integer,
        weather_loc_id integer,
        date_id integer,
        card_type_id integer,
        atm_status varchar(20),
        currency varchar(10),
        service varchar(20),
        transaction_amount integer,
        message_code varchar(255),
        message_text varchar(255),
        rain_3h NUMERIC(10,3),
        clouds_all integer,
        weather_id integer,
        weather_main varchar(50),
        weather_description varchar(255),
        primary key(trans_id),
        foreign key(weather_loc_id) references etl_atm.location(location_id),
        foreign key(atm_id) references etl_atm.atm(atm_id),
        foreign key(date_id) references etl_atm.date(date_id),
        foreign key(card_type_id) references etl_atm.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 etl_atm.location from
's3://etl-bucket-sagarmoy/dim_location/part-00000-6353ab28-56be-4286-b8d8-f68e19b40a2a-c
000.csv'
iam_role 'arn:aws:iam::113744691613:role/upGrad_Redshift_S3_role'
delimiter ',' IGNOREHEADER 1
region 'us-east-1';
```

```
copy etl_atm.atm from
's3://etl-bucket-sagarmoy/dim_atm/part-00000-43aa1aeb-a56d-42fe-b793-98ee0906d81c-c000.
csv'
iam_role 'arn:aws:iam::113744691613:role/upGrad_Redshift_S3_role'
delimiter ',' IGNOREHEADER 1
region 'us-east-1';
```

```
copy etl_atm.date from
's3://etl-bucket-sagarmoy/dim_date/part-00000-8742b834-89b9-452d-a5de-e25d43b4582f-c000
.csv'
iam_role 'arn:aws:iam::113744691613:role/upGrad_Redshift_S3_role'
delimiter ',' IGNOREHEADER 1
timeformat 'auto'
region 'us-east-1';


copy etl_atm.card_type from
's3://etl-bucket-sagarmoy/dim_card_type/part-00000-3061e921-f5b9-443f-9b0a-572028d168c7-
c000.csv'
iam_role 'arn:aws:iam::113744691613:role/upGrad_Redshift_S3_role'
delimiter ',' IGNOREHEADER 1
region 'us-east-1';


copy etl_atm.atm_trans from
's3://etl-bucket-sagarmoy/fact_atm_trans/part-00000-f3f4a12c-4e3b-42cf-9448-92fb67dfe736-c0
00.csv'
iam_role 'arn:aws:iam::113744691613:role/upGrad_Redshift_S3_role'
delimiter ',' IGNOREHEADER 1
region 'us-east-1'
TRUNCATECOLUMNS
CSV;
```