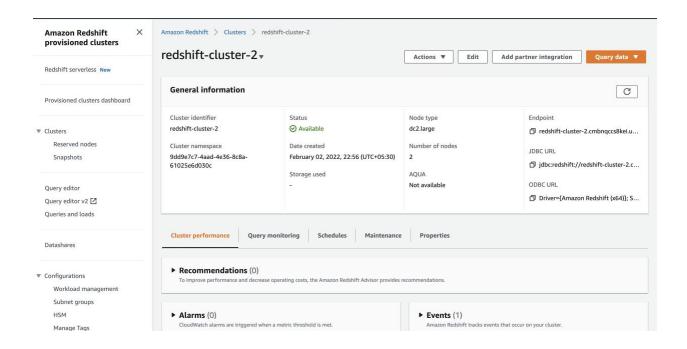




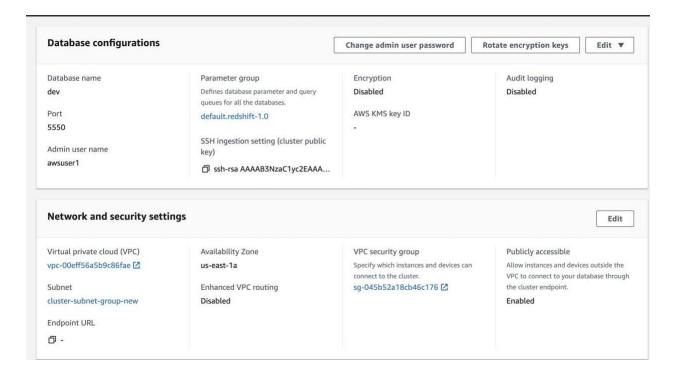
## Creation of a Redshift Cluster

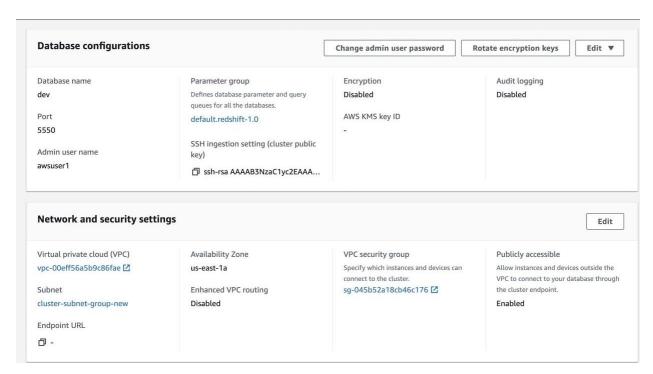
## Screenshots of the configuration of the Redshift cluster that you have created:











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:

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

create schema etl

1. Dim table - Location

```
create table etl.DIM_LOCATION(
              location_id varchar distkey sortkey primary key,
              location VARCHAR(50),
              streetname VARCHAR(255),
              street_number INT,
              zipcode INT.
              lat DECIMAL(10,3),
              Ion DECIMAL(10,3)
--copying from S3 to location table
copy etl.DIM_LOCATION from
's3://etlspark001/location/'
iam_role 'arn:aws:iam::146883206406:role/NewRole_S3Access'
delimiter ',' region 'us-east-1' removequotes;
   2. Dim table - atm
create table etl.DIM_ATM(
              atm_id INT distkey sortkey primary key,
              atm_number varchar(20),
              atm_manufacturer VARCHAR(50),
              atm_location_id INT,
              foreign key(atm location id) references etl.DIM LOCATION(location id)
-- copying from S3 S3 to atm table
copy etl.DIM_ATM from
's3://etlspark001/atm/'
iam role 'arn:aws:iam::146883206406:role/NewRole S3Access'
delimiter ',' region 'us-east-1' removequotes;
```





3. Dim table - date create table e\_schema.DIM\_DATE( date\_id INT distkey sortkey primary key, full\_date\_time TIMESTAMP, year INT, month VARCHAR(20), day INT, hour INT, weekday VARCHAR(20) -- copying from S3 S3 to date table copy etl.DIM\_DATE from 's3://etlspark001/date/' iam\_role 'arn:aws:iam::146883206406:role/NewRole\_S3Access' delimiter ',' region 'us-east-1' removequotes; 4. Dim table – cardtype create table etl.DIM\_CARD\_TYPE( card\_type\_id INT distkey sortkey primary key, card\_type VARCHAR(30) -- copying from S3 to cardtype table copy etl.DIM\_CARD\_TYPE from 's3://etlspark001/card\_type/' iam role 'arn:aws:iam::146883206406:role/NewRole\_S3Access' delimiter ',' region 'us-east-1' removequotes; Fact table - FACT\_ATM\_TRANS create table etl.FACT\_ATM\_TRANS( trans\_id BIGINT distkey sortkey primary key, 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) ,
foreign key(weather_loc_id) references etl.DIM_LOCATION(location_id),
foreign key(atm_id) references etl.DIM_ATM(atm_id),
foreign key(date_id) references etl.DIM_DATE(date_id),
foreign key(card_type_id) references etl.DIM_CARD_TYPE(card_type_id)

-- data importing from S3 to fact table
copy etl.FACT_ATM_TRANS from
s3://etlspark001/fact/'
iam_role 'arn:aws:iam::146883206406:role/NewRole_S3Access'
delimiter ',' region 'us-east-1' removequotes;
```