### Creation of a RedShift Cluster

**Screenshots of the configuration of the RedShift cluster that you have created:**

<Screenshot of the type of machine used along with number of nodes>

1. Cluster Image

A screenshot of a computer

Description automatically generated

1. Configuration Details

A computer screen shot

Description automatically generated with low confidence

1. Additional Details

A computer screen shot

Description automatically generated with low confidence

### 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 foriegn keys:**

<Queries>

1. Create Schema

create schema redshift\_etlcasestudy;

1. Create DIM\_LOCATION Table

create table redshift\_etlcasestudy.DIM\_LOCATION(

atm\_location varchar(50),

atm\_streetname varchar(255),

atm\_street\_number integer not null,

atm\_zipcode integer not null,

atm\_lat decimal(10,3),

atm\_lon decimal(10,3),

location\_id varchar(100) not null PRIMARY KEY);

A picture containing text, screenshot, computer, computer

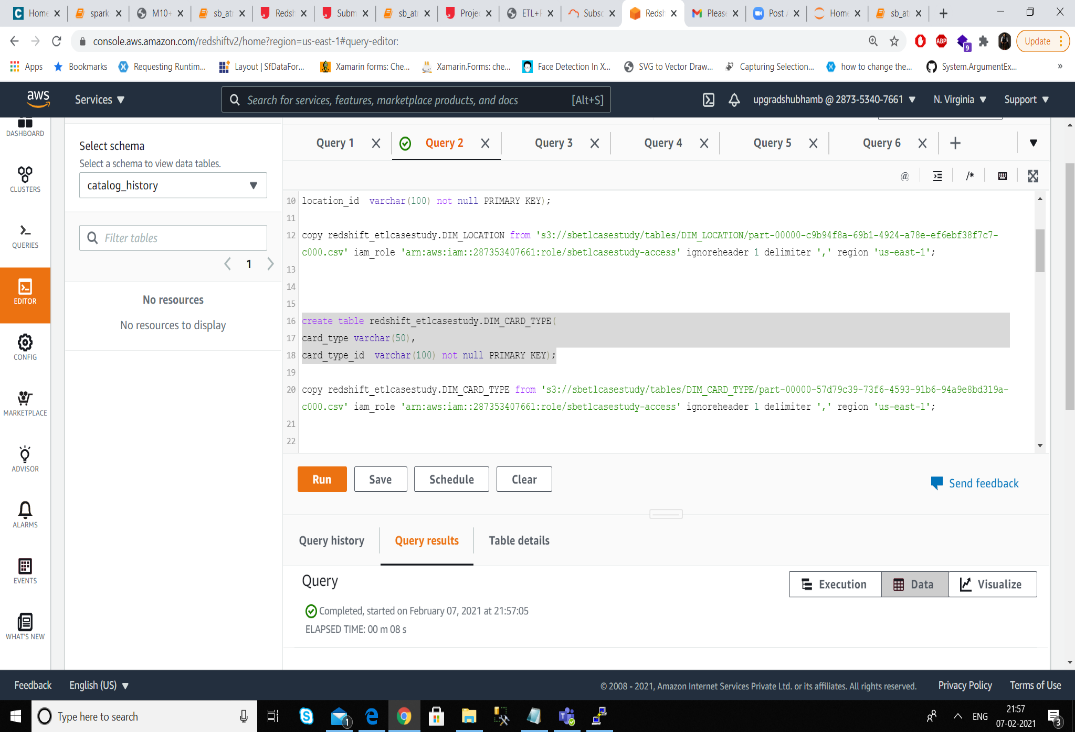
Description automatically generated

1. Create DIM\_CARD\_TYPE Table

create table redshift\_etlcasestudy.DIM\_CARD\_TYPE(

card\_type varchar(50),

card\_type\_id varchar(100) not null PRIMARY KEY);



1. Create DIM\_ATM Table

create table redshift\_etlcasestudy.DIM\_ATM(

atm\_id varchar(100) not null PRIMARY KEY,

atm\_manufacturer varchar(50),

atm\_number integer not null,

atm\_location\_id varchar(100) not null references redshift\_etlcasestudy.DIM\_LOCATION(location\_id));

Graphical user interface, text, application, email

Description automatically generated

1. Create DIM\_DATE Table

create table redshift\_etlcasestudy.DIM\_DATE(

year integer not null,

month varchar(20),

day integer not null,

hour integer not null,

weekday varchar(20),

full\_date\_time timestamp,

date\_id varchar(100) not null PRIMARY KEY);

A picture containing text, screenshot, computer

Description automatically generated

1. Create FACT\_ATM\_TRANS Table

create table redshift\_etlcasestudy.FACT\_ATM\_TRANS(

trans\_id varchar(100) not null PRIMARY KEY,

atm\_id varchar(100) not null references redshift\_etlcasestudy.DIM\_ATM(atm\_id),

weather\_loc\_id varchar(100) not null references redshift\_etlcasestudy.DIM\_LOCATION(location\_id),

date\_id varchar(100) not null references redshift\_etlcasestudy.DIM\_DATE(date\_id),

card\_type\_id varchar(100) not null references redshift\_etlcasestudy.DIM\_CARD\_TYPE(card\_type\_id),

atm\_status varchar(20),

currency varchar(10),

service varchar(20),

transaction\_amount integer,

message\_code varchar(255),

message\_text varchar(255),

rain\_3h decimal(10,3),

clouds\_all decimal(10,3),

weather\_id integer,

weather\_main varchar(50),

weather\_description varchar(255));

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Description automatically generated

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### 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>

1. Copy DIM\_LOCATION

copy redshift\_etlcasestudy.DIM\_LOCATION from 's3://sbetlcasestudy/tables/DIM\_LOCATION/part-00000-c9b94f8a-69b1-4924-a78e-ef6ebf38f7c7-c000.csv' iam\_role 'arn:aws:iam::287353407661:role/sbetlcasestudy-access' ignoreheader 1 delimiter ',' region 'us-east-1';

A picture containing text, screenshot, computer, computer

Description automatically generated

1. Copy DIM\_CARD\_TYPE

copy redshift\_etlcasestudy.DIM\_CARD\_TYPE from 's3://sbetlcasestudy/tables/DIM\_CARD\_TYPE/part-00000-57d79c39-73f6-4593-91b6-94a9e8bd319a-c000.csv' iam\_role 'arn:aws:iam::287353407661:role/sbetlcasestudy-access' ignoreheader 1 delimiter ',' region 'us-east-1';

A picture containing text, screenshot, computer, computer

Description automatically generated

1. Copy DIM\_ATM

copy redshift\_etlcasestudy.DIM\_ATM from 's3://sbetlcasestudy/tables/DIM\_ATM/part-00000-2d3acbd6-9eea-41bb-8a94-d3516436da37-c000.csv' iam\_role 'arn:aws:iam::287353407661:role/sbetlcasestudy-access' ignoreheader 1 delimiter ',' region 'us-east-1';

A picture containing text, screenshot, computer, computer

Description automatically generated

1. Copy DIM\_DATE

copy redshift\_etlcasestudy.DIM\_DATE from 's3://sbetlcasestudy/tables/DIM\_DATE/part-00000-80eaf1a4-a776-4047-9589-25daf08b8810-c000.csv' iam\_role 'arn:aws:iam::287353407661:role/sbetlcasestudy-access' ignoreheader 1 delimiter ',' region 'us-east-1' timeformat 'YYYY-MM-DDTHH:MI:SS';

A picture containing text, screenshot, computer, computer

Description automatically generated

1. Copy FACT\_ATM\_TRANS

copy redshift\_etlcasestudy.FACT\_ATM\_TRANS from 's3://sbetlcasestudy/tables/FACT\_ATM\_TRANS/part-00000-7307f0b5-7942-4531-9582-67a51436f509-c000.csv' iam\_role 'arn:aws:iam::287353407661:role/sbetlcasestudy-access' ignoreheader 1 delimiter ',' region 'us-east-1' removequotes

emptyasnull

blanksasnull

maxerror 5

A picture containing text, screenshot, computer, computer

Description automatically generated