

## Creation of a RedShift Cluster

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

Cluster details

Resize

Cluster identifier	Node type	Number of nodes	Total available storage
redshift-cluster-naresh	dc2.large	2	320 GB

► Additional details

Database configurations

Edit

Database name	Port	Master user name
masterdb_naresh	5439	awsuser

Parameter group

Defines database parameter and query queues for all the databases.

[default.redshift-1.0](#)

Encryption

Disabled

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_project;

create table etl_project.DIM_LOCATION(
location VARCHAR(255),
streetname VARCHAR(255),
street_number INT,
zipcode INT,
lat DECIMAL(10,3),
lon DECIMAL(10,3),
location_id VARCHAR(500),
primary key(location_id)
);

create table etl_project.dim_Atm (
atm_id INT,
atm_number INT,
atm_manufacturer VARCHAR(50),
atm_location_id VARCHAR(500),
PRIMARY KEY (atm_id),
FOREIGN KEY (atm_location_id) REFERENCES
etl_project.DIM_LOCATION (location_id));

create table etl_project.dim_date (
year INT,
month VARCHAR(20),
day INT,
hour INT,
weekday VARCHAR(20),
full_date_time TIMESTAMP,
date_id VARCHAR(100),
PRIMARY KEY (date_id) );

create table etl_project.DIM_CARD_TYPE (
card_type VARCHAR(250),
card_type_id VARCHAR(250),
```

```
PRIMARY KEY (card_type_id) ) ;
```

```
create table etl_project.fact_Atm_trans (
trans_id VARCHAR(255),
atm_id INT,
weather_loc_id VARCHAR(255),
date_id VARCHAR(255),
card_type_id VARCHAR(255),
atm_status VARCHAR(20),
currency VARCHAR(50),
service VARCHAR(50),
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),
PRIMARY KEY (trans_id),
FOREIGN KEY (weather_loc_id) REFERENCES etl_project.DIM_LOCATION
(location_id),
FOREIGN KEY (atm_id) REFERENCES etl_project.DIM_ATM (atm_id),
FOREIGN KEY (date_id) REFERENCES etl_project.DIM_DATE (date_id),
FOREIGN KEY (card_type_id) REFERENCES etl_project.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

```
-- DIM LOCATION Loading
copy etl_project.DIM_LOCATION
from 's3://online-atm-trans-naresh/tables/DIM_LOCATION/part-
00000-529e4274-5a0e-4f80-88ef-b59621ca8e62-c000.csv'
iam_role 'arn:aws:iam::329627341842:role/redshift-s3-access-
role-naresh'
delimiter ',' region 'us-east-1'
CSV IGNOREHEADER 1;
```

```
-- DIM Date Loading
copy etl_project.DIM_DATE
from 's3://online-atm-trans-naresh/tables/DIM_DATE/part-00000-
0a3248a0-e39f-49ff-8918-10da5f53ef79-c000.csv'
iam_role 'arn:aws:iam::329627341842:role/redshift-s3-access-
role-naresh'
delimiter ',' region 'us-east-1'
CSV IGNOREHEADER 1;
```

```
--DIM_CARD_TYPE Loading
copy etl_project.DIM_CARD_TYPE
from 's3://online-atm-trans-naresh/tables/DIM_CARD_TYPE/part-
00000-c903c954-392a-4660-b9bd-3c44520d71f3-c000.csv'
iam_role 'arn:aws:iam::329627341842:role/redshift-s3-access-
role-naresh'
delimiter ',' region 'us-east-1'
CSV IGNOREHEADER 1;
```

```
--DIM_ATM Loading
copy etl_project.DIM_ATM
from 's3://online-atm-trans-naresh/tables/DIM_ATM/part-00000-
6b338c0d-8505-44d4-862c-6592f6a1a3ab-c000.csv'
iam_role 'arn:aws:iam::329627341842:role/redshift-s3-access-
role-naresh'
delimiter ',' region 'us-east-1'
CSV IGNOREHEADER 1;
```

```
--FACT_ATM_TRANS Loading
copy etl_project.fact_Atm_trans
from 's3://online-atm-trans-naresh/tables/FACT_ATM_TRANS/part-
00000-3080fae6-0664-4aa8-8b20-137b997e1f9c-c000.csv'
iam_role 'arn:aws:iam::329627341842:role/redshift-s3-access-
role-naresh'
delimiter ',' region 'us-east-1'
CSV IGNOREHEADER 1;
```