

## Creation of a Redshift Cluster

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

| redshift-cluster-etl-priya   |                                   |                 |  |
|--|-----------------------------------|-----------------|--|
| <div> <div>Actions ▼</div> <div>Edit</div> <div>Add partner integration</div> <div>Query data ▼</div> </div> |                                   |                 |  |
| General information  |                                   |                 |  |
| Cluster identifier   | Status                            | Node type       | Endpoint   |
| redshift-cluster-etl-priya   | Available                         | dc2.large       | redshift-cluster-etl-priya.cbqdf5qvnxs.us-east-1.reds...   |
| Cluster namespace  | Date created                      | Number of nodes | JDBC URL   |
| 70408a60-3f32-462b-81fc-38c3aedb3bb2   | March 09, 2023, 22:49 (UTC+05:30) | 2               | jdbc:redshift://redshift-cluster-etl-priya.cbqdf5qvnxs.... |
| Cluster configuration  | Storage used                      |                 | ODBC URL   |
| Production   | 0.02% (0.06 of 320 GB used)       |                 | Driver={Amazon Redshift (x64)}; Server=redshift-cluste...  |
|  | Multi-AZ                          |                 |  |
|  | No                                |                 |  |

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 atm_data;
```

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

```
create table 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)  
);
```

Resources
Info

Select database
Info

To view schemas, select a database.

etl-priya
▼

Select schema
Info

To view tables, select a schema.

atm\_data
▼

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Filter tables

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|                       |     |
|-----------------------|-----|
| ▶ dim_atm_pkey        | ... |
| ▶ dim_card_type_pkey  | ... |
| ▶ dim_date_pkey       | ... |
| ▶ dim_location_pkey   | ... |
| ▶ fact_atm_trans_pkey | ... |
| ▶ dim_atm             | ... |
| ▶ dim_card_type       | ... |
| ▶ dim_date            | ... |
| ▶ dim_location        | ... |
| ▶ fact_atm_trans      | ... |

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 atm_data.dim_location from 's3://etlprojectbypriya/dim_location/part-00000-4f4b02d0-919a-442e-9134-f459cbdb7909-c000.csv'
```

```
iam_role 'arn:aws:iam::172624576469:role/redshift_s3_fullaccess'
```

```
delimiter ',' region 'us-east-1'
```

```
CSV;
```

```
copy atm_data.dim_atm from 's3://etlprojectbypriya/dim_atm/part-00000-c4425605-e626-4cd2-adb2-cef68f7cb1b9-c000.csv'
```

```
iam_role 'arn:aws:iam::172624576469:role/redshift_s3_fullaccess'
```

```
delimiter ',' region 'us-east-1'
```

```
CSV;
```

```
copy atm_data.dim_date from 's3://etlprojectbypriya/dim_date/part-00000-7a7ef505-bc12-476c-a0a6-e9e8b544fe44-c000.csv'
```

```
iam_role 'arn:aws:iam::172624576469:role/redshift_s3_fullaccess'
```

```
delimiter ',' region 'us-east-1'
```

```
CSV;
```

```
copy atm_data.dim_card_type from 's3://etlprojectbypriya/dim_card_type/part-00000-
```

```
b9c7eb07-29c6-4445-ba0f-98de14834601-c000.csv'
```

```
iam_role 'arn:aws:iam::172624576469:role/redshift_s3_fullaccess' delimiter ',' region 'us-east-1'
```

```
CSV;
```