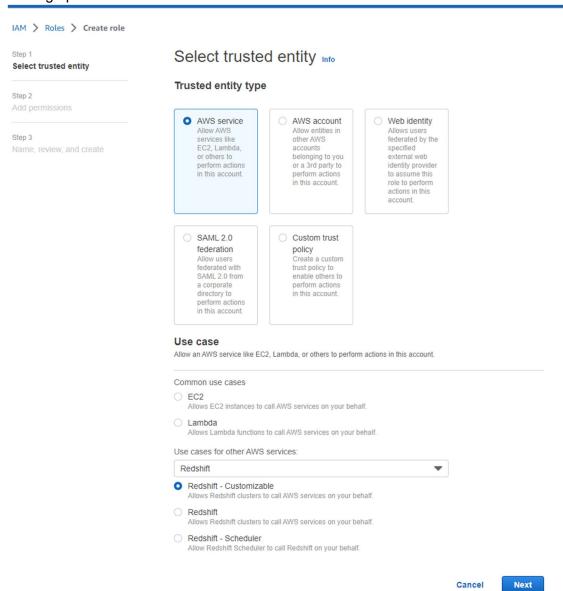




# Creation of a Redshift Cluster

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

• Setting up IAM role

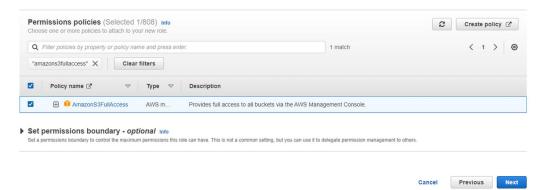








### Add permissions Info





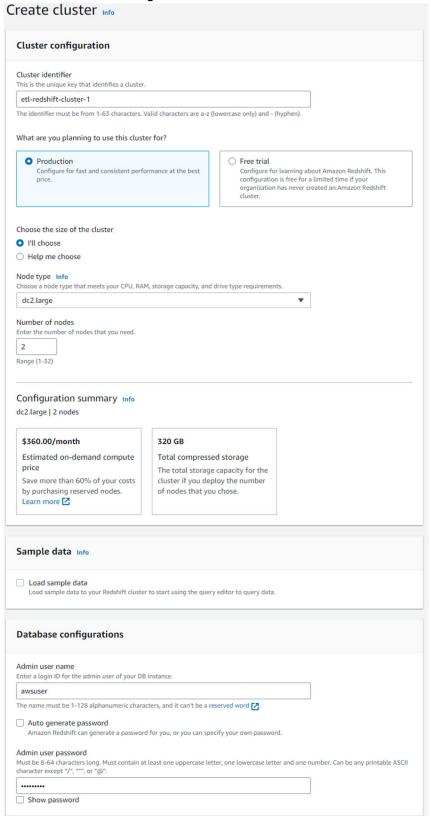


## IAM > Roles > Create role Step 1 Name, review, and create Select trusted entity Role details Add permissions Role name Step 3 Enter a meaningful name to identify this role Name, review, and create etl-redshift-s3-01 Maximum 64 characters. Use alphanumeric and '+=,.@-\_' characters. Description Add a short explanation for this role. Allows Redshift clusters to call AWS services on your behalf. Maximum 1000 characters. Use alphanumeric and '+=,.@-\_' characters. Step 1: Select trusted entities Edit 1 - { "Version": "2012-10-17", 2 3 + "Statement": [ 4 + "Effect": "Allow", "Action": [ "sts:AssumeRole" 8 "Principal": { "Service": [ "redshift.amazonaws.com" 9+ 10 -11 12 13 14 } ] 16 } Step 2: Add permissions Edit Permissions policy summary Policy name ☑ Туре Attached as AmazonS3FullAccess AWS managed Permissions policy Tags Add tags - optional Info Tags are key-value pairs that you can add to AWS resources to help identify, organize, or search for resources. No tags associated with the resource. Add tag You can add up to 50 more tags. Cancel Previous Create role



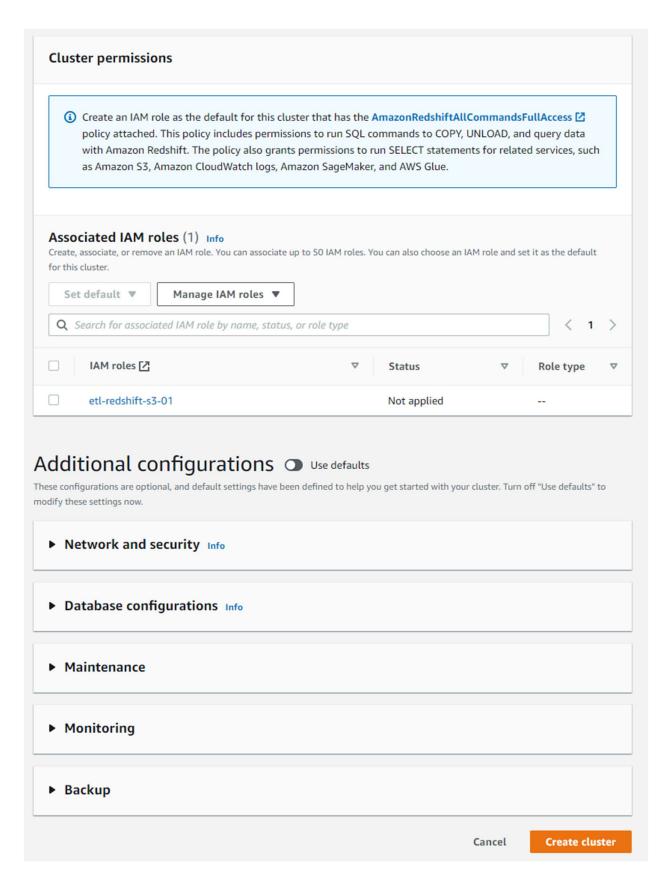


• Redshift Cluster Configuration





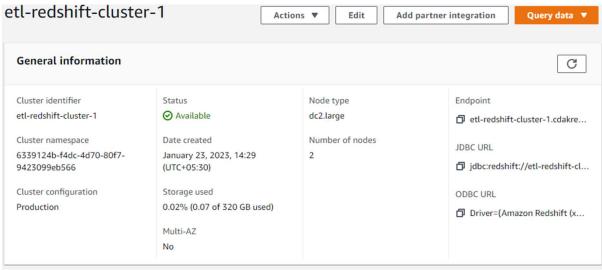








Created Redshift cluster







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; 1 create schema atm; 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Save Schedule Clear Run Table details Query results Query Completed, started on January 24, 2023 at 11:58:30 ELAPSED TIME: 00 m 56 s

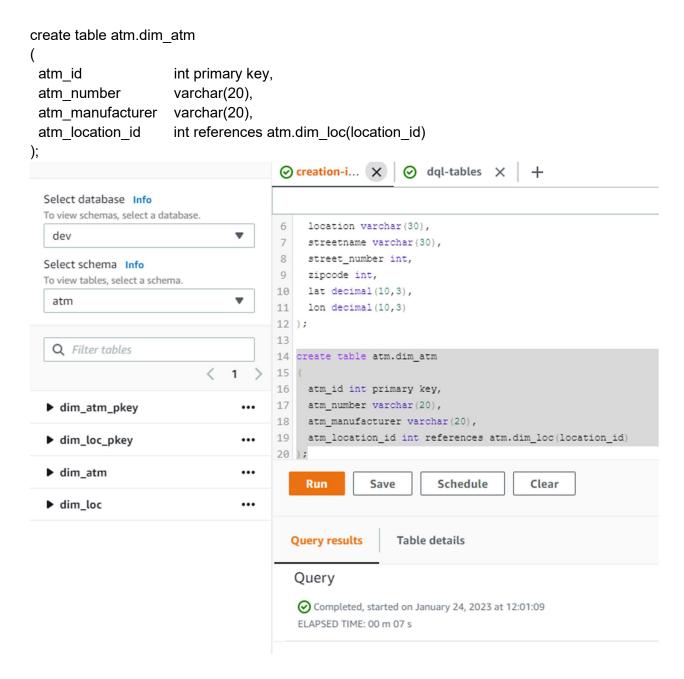




```
create table atm.dim loc
 location id
                       int primary key,
 location
                       varchar(30),
 streetname
                       varchar(30),
 street number
                       int,
 zipcode int,
 lat
                       decimal(10,3),
                       decimal(10,3)
 lon
);
                                           ⊘ creation-i... ×
                                                                 Select database Info
  To view schemas, select a database.
                                              create schema atm;
                                           2
                                           3
                                              create table atm.dim_loc
  Select schema Info
                                           4
  To view tables, select a schema.
                                           5
                                                location_id int primary key,
    atm
                                           6
                                                location varchar(30),
                                           7
                                                streetname varchar(30),
                                                street_number int,
                                           8
   Q Filter tables
                                           9
                                                zipcode int,
                                           10
                                                lat decimal(10,3),
                                                lon decimal(10,3)
                                           11
                                           12);
  ▶ dim_loc_pkey
                                           13
                                           14
  ▶ dim_loc
                                           15
                                                Run
                                                           Save
                                                                       Schedule
                                                                                       Clear
                                             Query results
                                                                Table details
                                              Query
                                              Completed, started on January 24, 2023 at 11:59:42
                                               ELAPSED TIME: 00 m 16 s
```







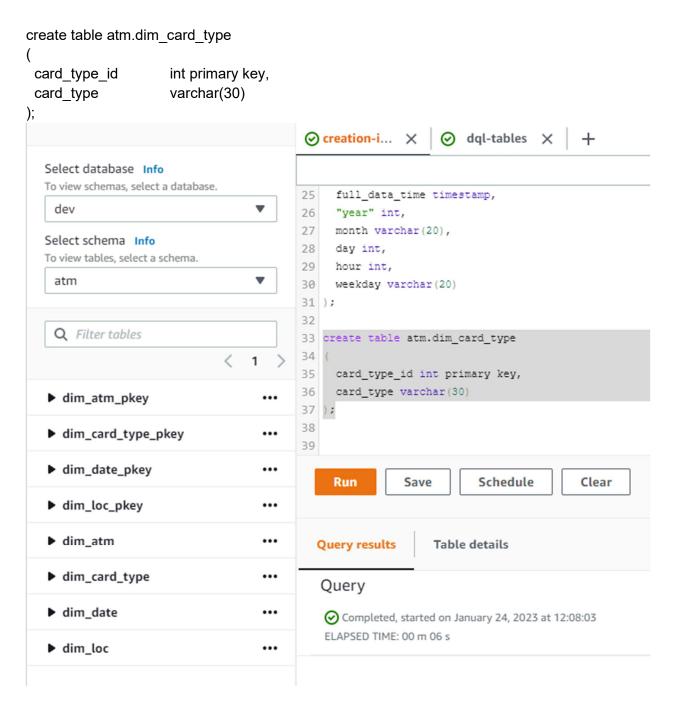




```
create table atm.dim date
 date id
                        int primary key,
 full_date_time
                        timestamp,
 "year"
                        int,
                        varchar(20),
 month
 day
                        int,
 hour
                        int,
 weekday
                        varchar(20)
);
                                           ⊘ creation-i... ×
                                                                Select database Info
  To view schemas, select a database.
                                                dom_tocation_td int references dom.dim_toc(tocation_td)
                                           20);
    dev
                                           21
  Select schema Info
                                           22 create table atm.dim_date
  To view tables, select a schema.
                                           23
                                              date_id int primary key,
                                           24
                                           25
                                               full data time timestamp,
                                               "year" int,
                                           27
                                               month varchar(20),
    Q Filter tables
                                               day int,
                                           28
                                   1
                                          29
                                               hour int,
                                                weekday varchar(20)
                                           30
   ▶ dim_atm_pkey
                                    •••
                                           31 );
                                           32
   ▶ dim_date_pkey
                                    •••
                                           33
                                           21
   ▶ dim_loc_pkey
                                               Run
                                                          Save
                                                                      Schedule
                                                                                      Clear
   ▶ dim_atm
                                    •••
   dim_date
                                    •••
                                             Query results
                                                               Table details
   ▶ dim_loc
                                             Query
                                              Ompleted, started on January 24, 2023 at 12:06:24
                                              ELAPSED TIME: 00 m 15 s
```







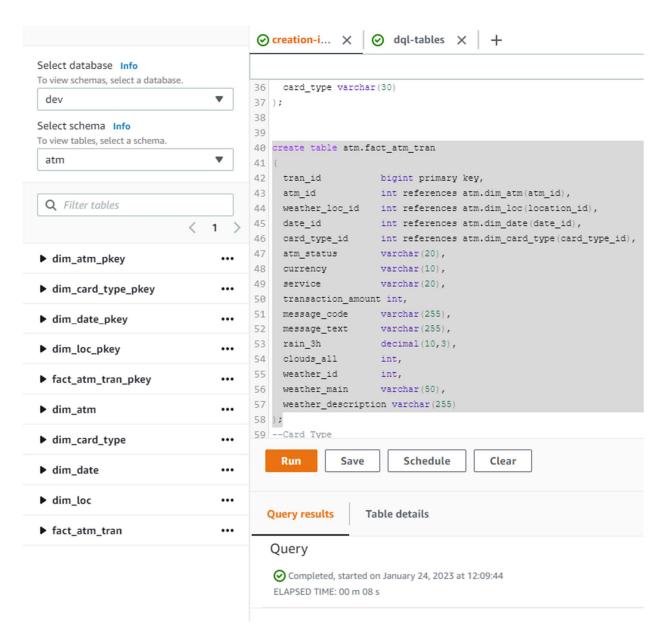




```
create table atm.fact atm tran
 tran_id
                             bigint primary key,
 atm id
                             int references atm.dim_atm(atm_id),
                             int references atm.dim_loc(location_id),
 weather_loc_id
 date id
                             int references atm.dim date(date id),
                             int references atm.dim_card_type(card_type_id),
 card_type_id
 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)
);
```







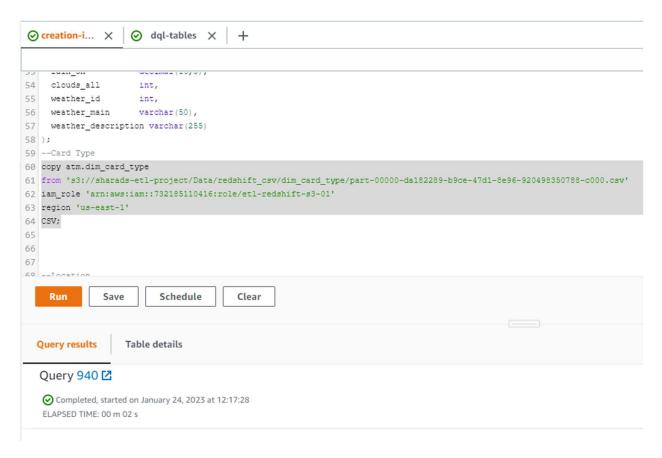




# Loading data into a Redshift cluster from Amazon S3 bucket

# Queries to copy the data from S3 buckets to the Redshift cluster in the appropriate tables

--Card Type copy atm.dim\_card\_type from 's3://sharads-etl-project/Data/redshift\_csv/dim\_card\_type/part-00000-da182289-b9ce-47d1-8e96-920498350788-c000.csv' iam\_role 'arn:aws:iam::732185110416:role/etl-redshift-s3-01' region 'us-east-1' CSV;







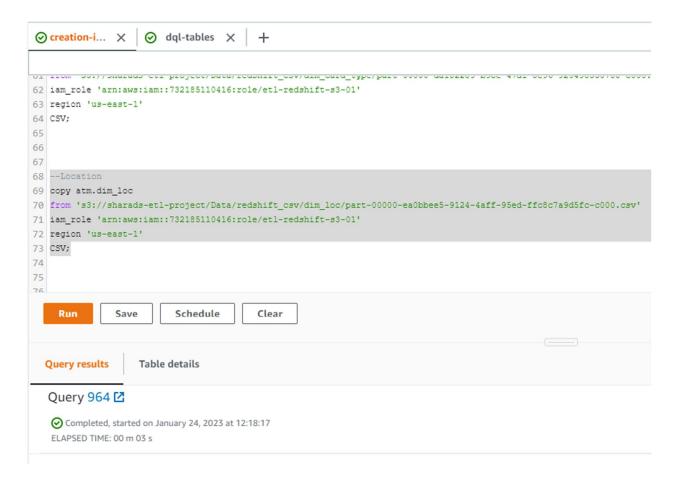
--Location

copy atm.dim loc

from 's3://sharads-etl-project/Data/redshift\_csv/dim\_loc/part-00000-ea0bbee5-9124-4aff-95ed-ffc8c7a9d5fc-c000.csv'

iam\_role 'arn:aws:iam::732185110416:role/etl-redshift-s3-01' region 'us-east-1'

CSV;







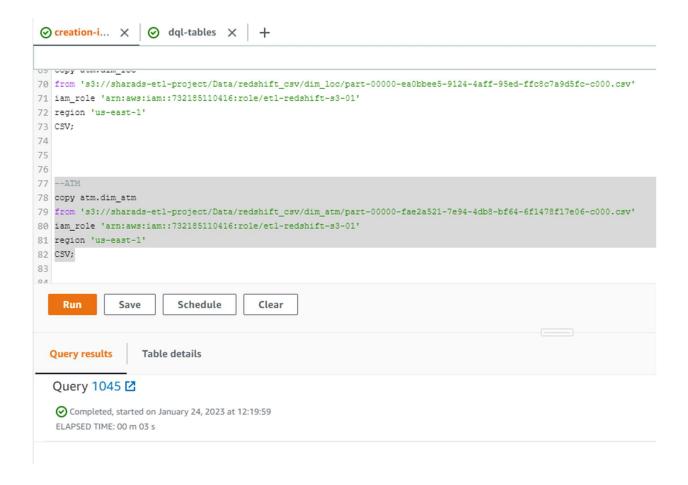
### --ATM

copy atm.dim atm

from 's3://sharads-etl-project/Data/redshift\_csv/dim\_atm/part-00000-fae2a521-7e94-4db8-bf64-6f1478f17e06-c000.csv'

iam\_role 'arn:aws:iam::732185110416:role/etl-redshift-s3-01' region 'us-east-1'

CSV;







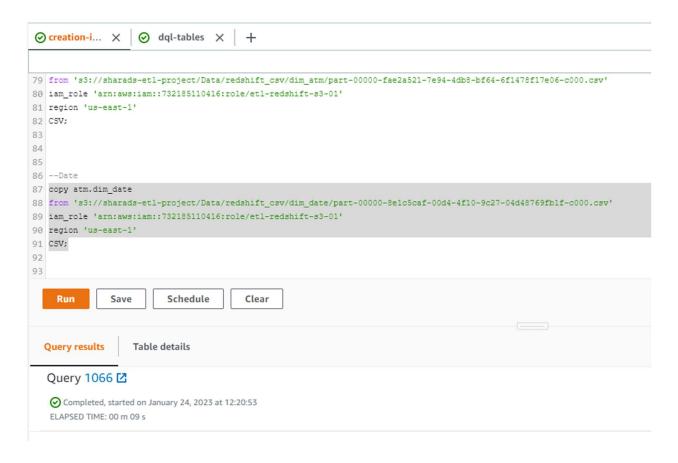
--Date

copy atm.dim date

from 's3://sharads-etl-project/Data/redshift\_csv/dim\_date/part-00000-8e1c5caf-00d4-4f10-9c27-04d48769fb1f-c000.csv'

iam\_role 'arn:aws:iam::732185110416:role/etl-redshift-s3-01' region 'us-east-1'

CSV;







### --ATM Transaction

copy atm.fact\_atm\_tran from 's3://sharads-etl-project/Data/redshift\_csv/fact\_atm\_tran1/part-00000-77c6b699-61fb-4ea8-8bc7-d3ae29187fd2-c000.csv' iam\_role 'arn:aws:iam::732185110416:role/etl-redshift-s3-01' region 'us-east-1' CSV;

