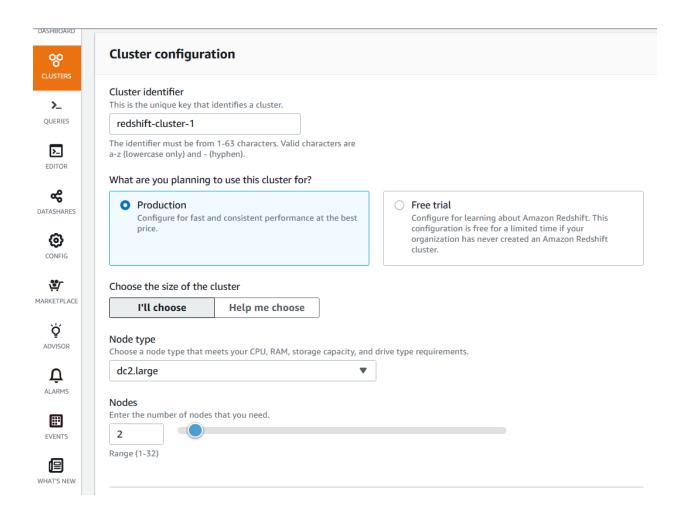




## Creation of a Redshift Cluster

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



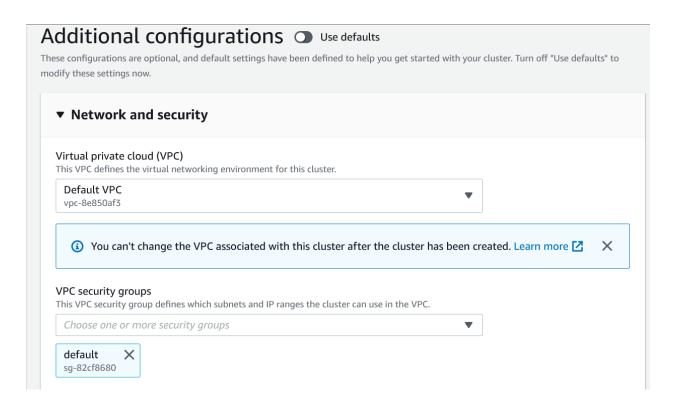


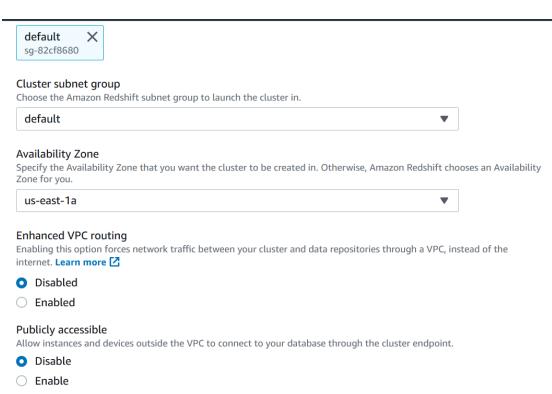


Admin user name Enter a login ID for the admin user of your DB instance.	
awsuser	
The name must be 1-128 alphanumeric characters, and it can't be a <b>reserved word</b> .	
Auto generate password Amazon Redshift can generate a password for you, or you can specify your own password.	
Admin user password	
•••••	
Show password	
Must be 8-64 characters long. Must contain at least one uppercase letter, one lowercase letter character except "/", """, or "@".	er and one number. Can be any printable ASCII
▼ Cluster permissions  ③ Your cluster needs permissions to access other AWS services on your behalf. For the required permissions, add IAM roles with the principal "redshift.amazonaws.com". You can associate up to 10 IAM roles with this	
cluster. Learn more 🗹	
Available IAM roles	
Choose an IAM role  ▼ C Asso	ociate IAM role
Associated IAM roles	Status
Redshift_SGC  arn:aws:iam::139471262780:role/Redshift_SGC	Not Remove













▼ Database configurations
Database name Specify a database name to create an additional database.
dev
The name must be 1-64 alphanumeric characters (lowercase only), and it can't be a <b>reserved word</b> .
Database port Port number where the database accepts inbound connections. You can't change the port after the cluster has been created.
5439
The port must be numeric (1150-65535).
Parameter groups Defines database parameter and query queues for all the databases.
default.redshift-1.0  Default parameter group for redshift-1.0
Encryption Encrypt all data on your cluster.
<ul><li>Disabled</li></ul>
Use AWS Key Management Service (AWS KMS)
Use a hardware security module (HSM)
▼ Database configurations
Database name Specify a database name to create an additional database.
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The port must be numeric (1150-65535).
Parameter groups Defines database parameter and query queues for all the databases.
default.redshift-1.0  Default parameter group for redshift-1.0
Encryption
Encrypt all data on your cluster.
O Disabled
<ul><li>Use AWS Key Management Service (AWS KMS)</li><li>Use a hardware security module (HSM)</li></ul>





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 table DIM LOCATION(
location_id integer not null primary key,
location varchar(50),
streetname varchar(255),
street_number integer,
zipcode integer,
lat decimal(10,3),
Ion decimal(10,3));
create table DIM_ATM(
atm_id integer not null primary key,
atm_number varchar(20),
atm manufacturer varchar(50),
atm_location_id integer not null,
foreign key(atm_location_id) references DIM_ATM(atm_id));
create table DIM_DATE(
date_id integer not null primary key,
full_date_time timestamp,
year integer,
month varchar(20),
day integer,
hour integer,
weekday varchar(20));
create table DIM_CARD_TYPE(
card_type_id integer not null primary key,
card_type varchar(23));
```





create table FACT\_ATM\_TRANS( trans\_id BIGINT not null primary key, atm\_id integer not null, weather\_loc\_id integer not null, date\_id integer not null, card\_type\_id integer not null, 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 integer, weather\_id integer, weather\_main VARCHAR(50), weather description VARCHAR(255), foreign key(atm\_id) references DIM\_ATM(atm\_id), foreign key(date\_id) references DIM\_DATE(date\_id), foreign key(card\_type\_id) references DIM\_CARD\_TYPE(card\_type\_id), foreign key(weather\_loc\_id) references DIM\_LOCATION(location\_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

copy DIM\_LOCATION from 's3://jerinp/dim\_location/part-00000-ecc7cb4b-cb7b-4996-835c-a072b0e76d34-c000.csv' credentials

'aws iam role=arn:aws:iam::139471262780:role/Redshift SGC' delimiter ',' region 'us-east-1';

copy DIM\_ATM from 's3://jerinp/dim\_atm/part-00000-2e0c55f2-957f-4fb7-bba0-4e10e1117566-c000.csv' credentials 'aws\_iam\_role=arn:aws:iam::139471262780:role/Redshift\_SGC' delimiter ',' region 'us-east-1';

copy DIM\_DATE from 's3://jerinp/dim\_date/part-00000-0b7e52ee-e32d-4c1a-b4ed-410ff5f4faf0-c000.csv' credentials 'aws\_iam\_role=arn:aws:iam::139471262780:role/Redshift\_SGC' delimiter ',' timeformat 'auto' region 'us-east-1';

copy DIM\_CARD\_TYPE from 's3://jerinp/dim\_card\_type/part-00000-4474c06d-e07f-4de5-896a-168a83743af1-c000.csv' credentials

'aws iam role=arn:aws:iam::139471262780:role/Redshift SGC' delimiter ',' region 'us-east-1';

copy FACT\_ATM\_TRANS from 's3://jerinp/fact\_atm\_trans/part-00000-0c0ba84b-188b-406b-8e94-0bbfdd84724e-c000.csv' credentials

'aws iam role=arn:aws:iam::139471262780:role/Redshift SGC' delimiter ',' region 'us-east-1';