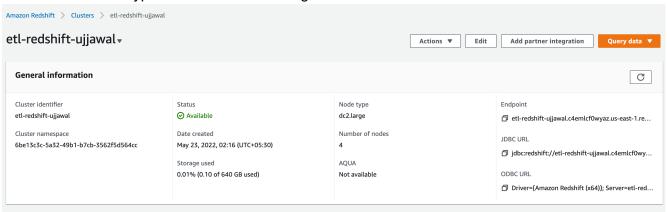


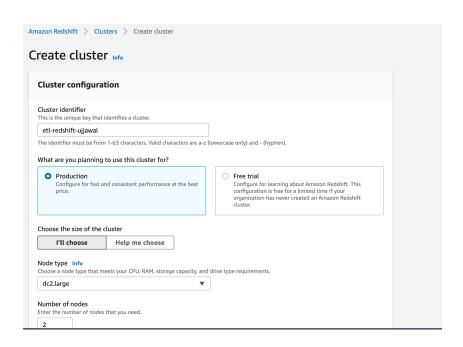


Creation of a Redshift Cluster

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

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









Database configurations		
Admin user name inter 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 reserved word .		
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 and one character except "/", """, or "@".	number. Can be any printable ASCII	
Cluster permissions		
① Create an IAM role as the default for this cluster that has the AmazonRedshiftAl policy attached. This policy includes permissions to run SQL commands to COPY, with Amazon Redshift. The policy also grants permissions to run SELECT stateme as Amazon S3, Amazon CloudWatch logs, Amazon SageMaker, and AWS Glue.	UNLOAD, and query data	

 Disabled Use AWS Key Management Service (AWS KMS) Use a hardware security module (HSM) 		
▼ Maintenance		
Maintenance window Choose the start of the weel Use default mainten	ly time range when you want pending notifications or maintenance applied to the cluster.	
Maintenance track	ols which cluster version is applied during a maintenance window.	
The maintenance track conti	The state of the supplied during a maintenance military	
 Current Use the most current ap 	proved cluster version.	
Current Use the most current apTrailing	proved cluster version. efore the current version.	





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;

Creating location dimension table

```
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)
);
```

Creating atm dimension table

```
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) );
```

• Creating date dimension table

```
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)
);

    Creating card type dimension table

create table atm data.DIM CARD TYPE (
card type id int not null DISTKEY SORTKEY, card type varchar(30)
PRIMARY KEY(card type id)
);

    Creating atm transactions fact table

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 DATA(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)
);
```





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

Copying the data to dim_location table

copy atm_data.dim_location from 's3://etlassignmentujjawal/dim_location/part-00000-4f4b02d0-919a-442e-9134-f459cbdb7909-c000.csv' iam_role 'arn:aws:iam::464886120274:role/redshift_s3_fullaccess' delimiter ',' region 'us-east-1'

CSV:

Copying the data to dim_atm table

copy atm_data.dim_atm from ' s3://etlassignmentujjawal/dim_atm/part-00000-c4425605-e626-4cd2-adb2-cef68f7cb1b9-c000.csv' iam_role 'arn:aws:iam::464886120274:role/redshift_s3_fullaccess' delimiter ',' region 'us-east-1'

CSV;

Copying the data to dim_date table

copy atm_data.dim_date from 's3://etlassignmentujjawal/dim_date/part-00000-7a7ef505-bc12-476c-a0a6-e9e8b544fe44-c000.csv' iam_role 'arn:aws:iam::464886120274:role/redshift_s3_fullaccess' delimiter ',' region 'us-east-1'

CSV;

• Copying the data to dim card type table

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

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

iam_role 'arn:aws:iam::464886120274:role/redshift_s3_fullaccess' delimiter ',' region 'us-east-1' CSV;

Copying the data to fact_atm_trans table

copy atm_data.fact_atm_trans from 's3://etlassignmentujjawal/fact_atm_trans/part-00000-978dd709-2ef2-4145-8ab5-9981558a8c60-c000.csv' iam_role 'arn:aws:iam::464886120274:role/redshift_s3_fullaccess' delimiter ',' region 'us-east-1'

CSV: