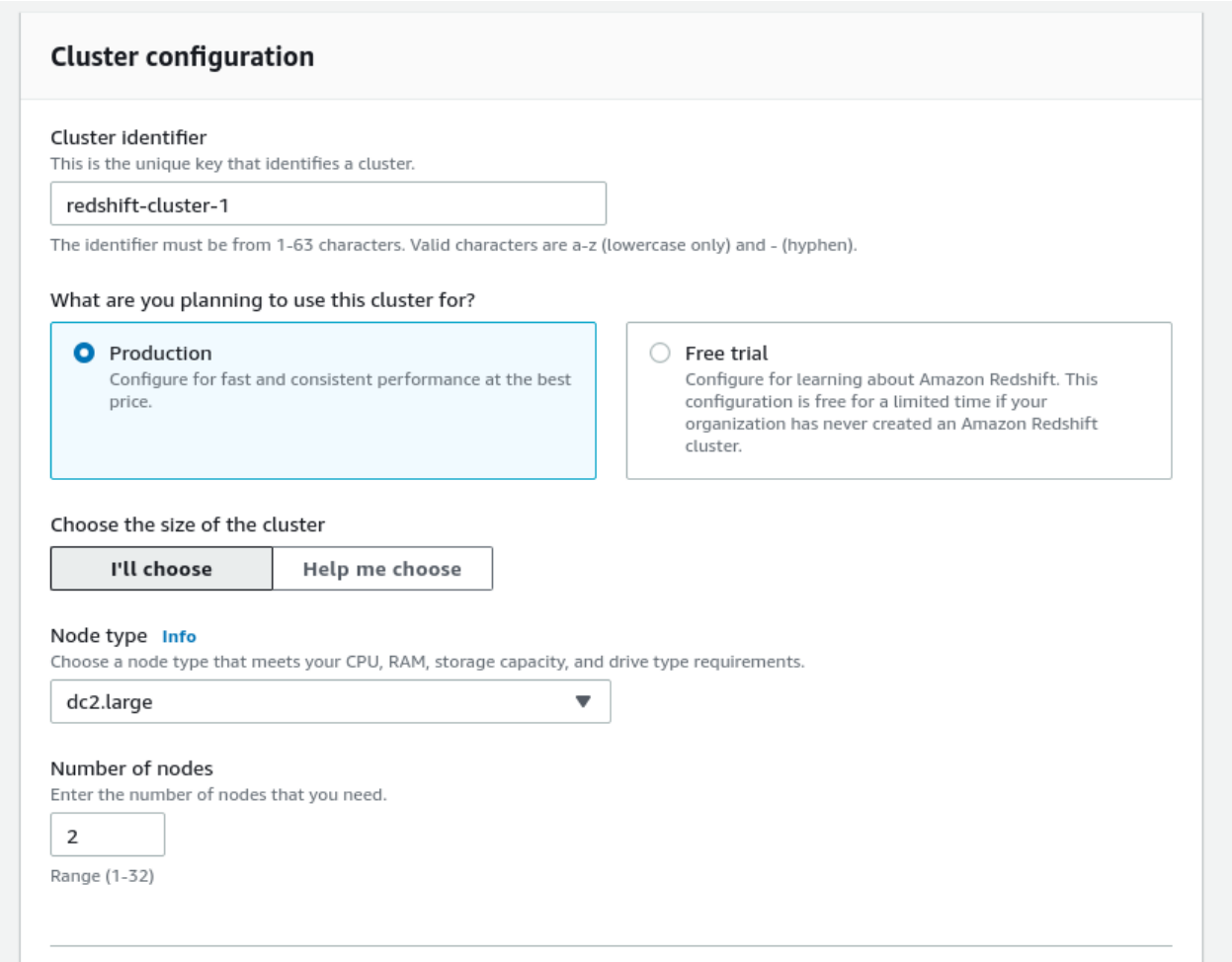
Creation of Redshift cluster



Cluster permissions

Create an IAM role as the default for this cluster that has the **AmazonRedshiftAllCommandsFullAccess** policy attached. This policy includes permissions to run SQL commands to COPY, UNLOAD, and query data with Amazon Redshift. The policy also grants permissions to run SELECT statements for related services, such as Amazon S3, Amazon CloudWatch logs, Amazon SageMaker, and AWS Glue.

Manage IAM roles

Create, associate, or remove an IAM role. You can associate up to 50 IAM roles. You can also choose an IAM role and set it as the default for this cluster.

Associated IAM roles (1) Info

Set default | Manage IAM roles

Search for associated IAM role by name, status, or role type

1

IAM roles	Status	Role type
redshift_s3_fullaccess	Not applied	--

Additional configurations

Use defaults

These configurations are optional, and default settings have been defined to help you get started with your cluster. Turn off "Use defaults" to modify these settings now.

Network and security

Virtual private cloud (VPC)
This VPC defines the virtual networking environment for this cluster.

sura_vpc
vpc-02c62d1d9d830b888

You can't change the VPC associated with this cluster after the cluster has been created. Learn more

VPC security groups
This VPC security group defines which subnets and IP ranges the cluster can use in the VPC.

Choose one or more security groups

default
sg-02a166a3c095d4037

cloudera
sg-0a2edd306e88d625c

Cluster subnet group
Choose the Amazon Redshift subnet group to launch the cluster in.

cluster-subnet-group-1

Availability Zone
Specify the Availability Zone that you want the cluster to be created in. Otherwise, Amazon Redshift chooses an Availability Zone for you.

No preference

Enhanced VPC routing
Enabling this option forces network traffic between your cluster and data repositories through a VPC, instead of the internet. **Learn more**

- (•) Disabled
- ( ) Enabled

▼ Database configurations

Database name

Specify a database name to create an additional database.

upgrad

The name must be 1-64 alphanumeric characters (lowercase only), and it can't be a **reserved word**.

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.

- (•) Disabled
- ( ) Use AWS Key Management Service (AWS KMS)
- ( ) Use a hardware security module (HSM)

Setting up a database in the RedShift cluster and running queries to create the dimension and fact tables

```
create schema atm_new_trans;


drop table if exists atm_new_trans.dim_date;
create table atm_new_trans.dim_date
(
     date_id integer not null,
     year integer,
     month varchar(20),
     day integer,
     weekday varchar(20),
     hour integer,
     full_date timestamp,
     constraint PK_dim_date primary key (date_id)
);
```

```
drop table if exists atm_new_trans.dim_date;
create table atm_new_trans.dim_date
(
    date_id integer not null,
    year integer,
    month varchar(20),
    day integer,
    weekday varchar(20),
    hour integer,
    full_date timestamp,
    constraint PK_dim_date primary key (date_id)
);
```

Run | Save | Schedule | Clear | Send feedback

Query results | Table details

Query

Execution | Data | Visualize

Completed, started on January 17, 2022 at 01:27:11

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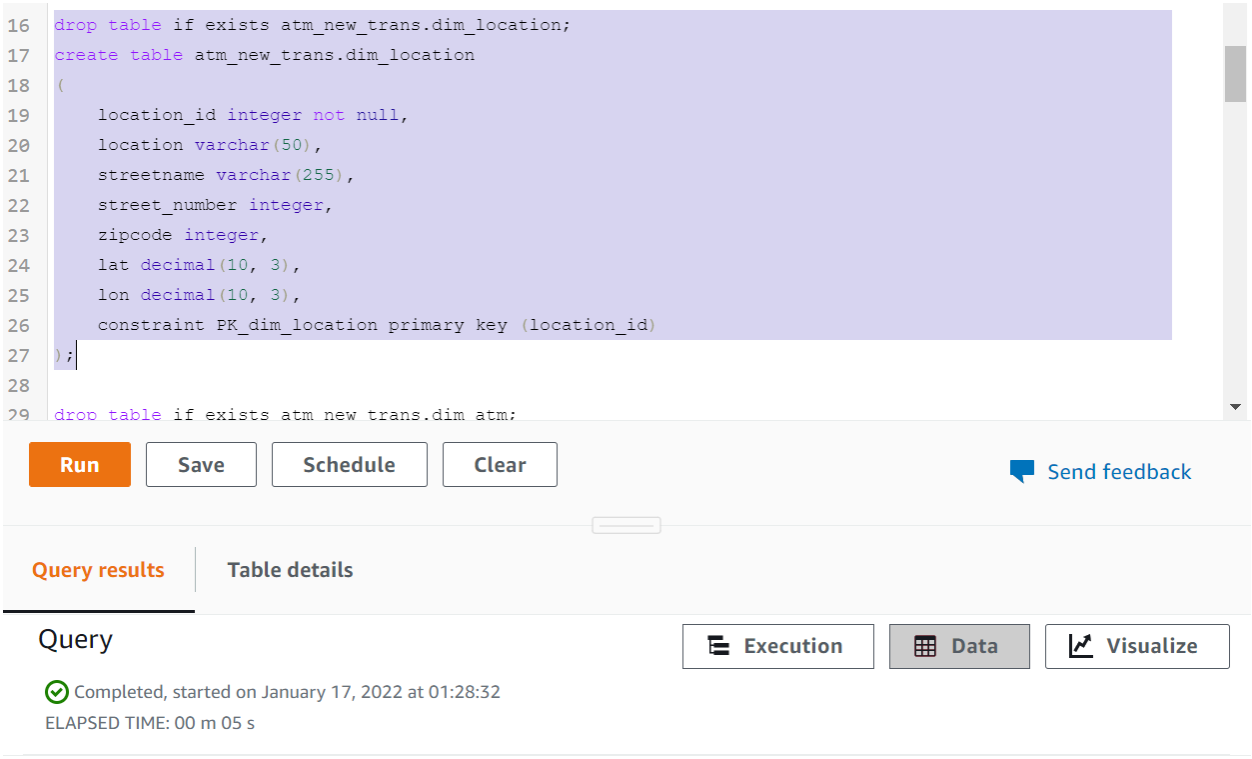
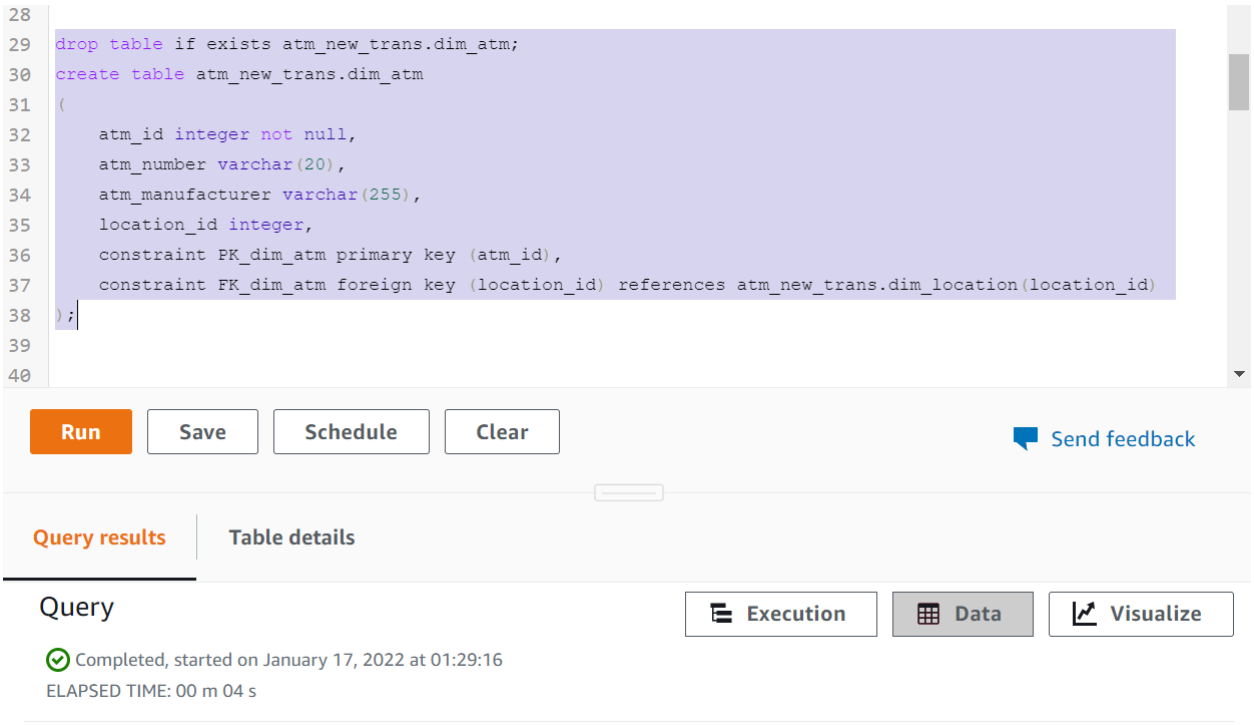
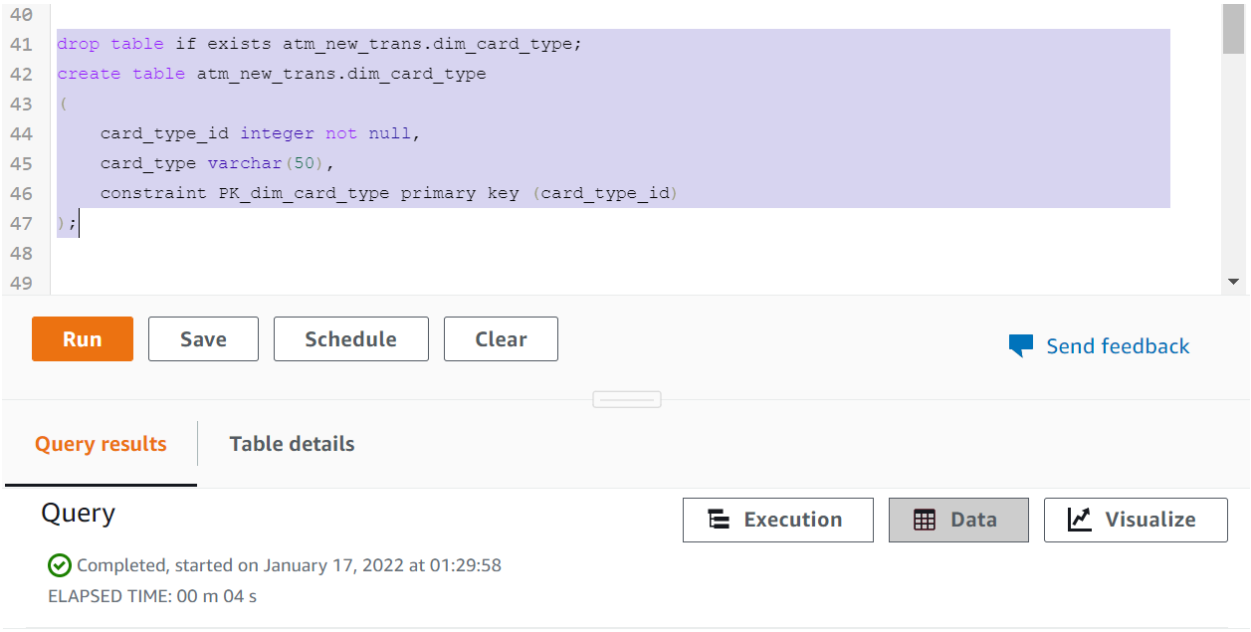
```
drop table if exists atm_new_trans.dim_location;
create table atm_new_trans.dim_location
(
	location_id integer not null,
	location varchar(50),
	streetname varchar(255),
	street_number integer,
	zipcode integer,
	lat decimal(10, 3),
	lon decimal(10, 3),
	constraint PK_dim_location primary key (location_id)
);
```



```
drop table if exists atm_new_trans.dim_atm;
create table atm_new_trans.dim_atm
(
	atm_id integer not null,
	atm_number varchar(20),
	atm_manufacturer varchar(255),
	location_id integer,
	constraint PK_dim_atm primary key (atm_id),
	constraint FK_dim_atm foreign key (location_id) references atm_new_trans.dim_location(location_id)
);
```



```
drop table if exists atm_new_trans.dim_card_type;
create table atm_new_trans.dim_card_type
(
      card_type_id integer not null,
      card_type varchar(50),
      constraint PK_dim_card_type primary key (card_type_id)
);
```



```
drop table if exists atm_new_trans.transaction_fact cascade;
create table atm_new_trans.transaction_fact
(
	trans_id bigint not null,
	date_id integer,
	atm_status varchar(20),
	atm_id integer,
	currency varchar(10),
	card_type_id integer,
	transaction_amount integer,
	service varchar(50),
	message_code varchar(255),
	message_text varchar(255),
	weather_loc_id integer,
	rain_3h decimal(10, 3),
	clouds_all integer,
	weather_id integer,
	weather_main varchar(255),
	weather_description varchar(255),
	constraint PK_transaction_fact primary key (trans_id),
	constraint FK_atm foreign key (atm_id) references
atm_new_trans.dim_atm(atm_id),
	constraint FK_card_type foreign key (card_type_id)
references atm_new_trans.dim_card_type(card_type_id),
	constraint FK_location foreign key (weather_loc_id)
references atm_new_trans.dim_location(location_id),
	constraint FK_date foreign key (date_id) references
atm_new_trans.dim_date(date_id)
);
```

```
49
50 drop table if exists atm_new_trans.transaction_fact cascade;
51 create table atm_new_trans.transaction_fact
52 (
53     trans_id bigint not null,
54     date_id integer,
55     atm_status varchar(20),
56     atm_id integer,
57     currency varchar(10),
58     card_type_id integer,
59     transaction_amount integer,
60     service varchar(50),
61     message code varchar(255),
```

Run | Save | Schedule | Clear | Send feedback

Query results | Table details

Query

Execution | Data | Visualize

Completed, started on January 17, 2022 at 01:30:37

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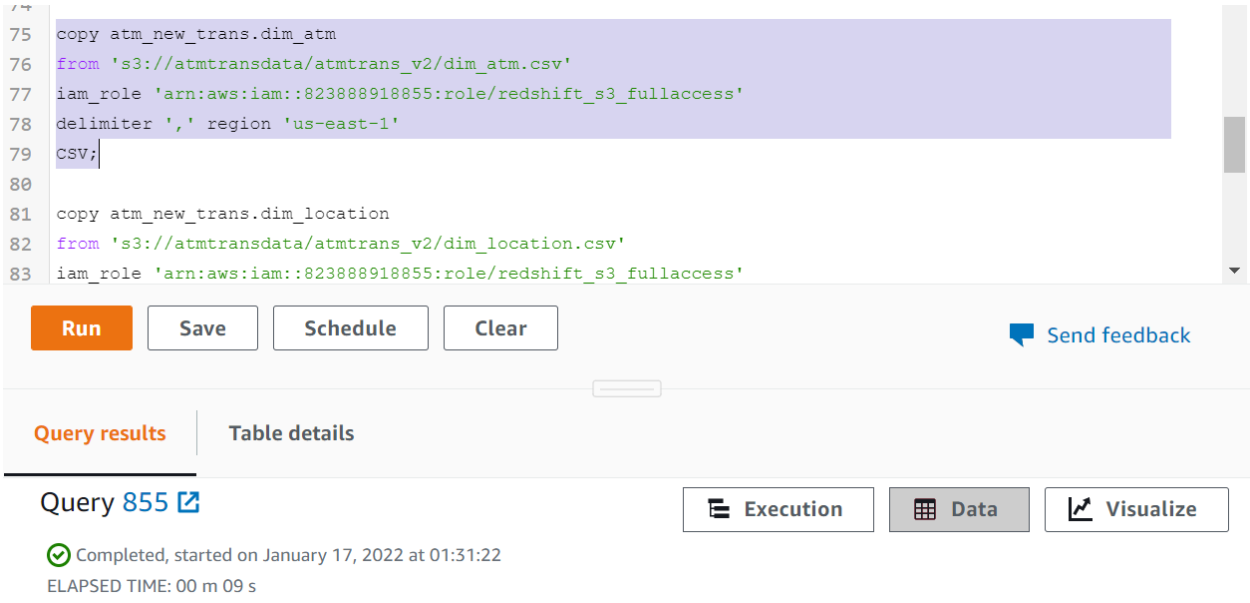
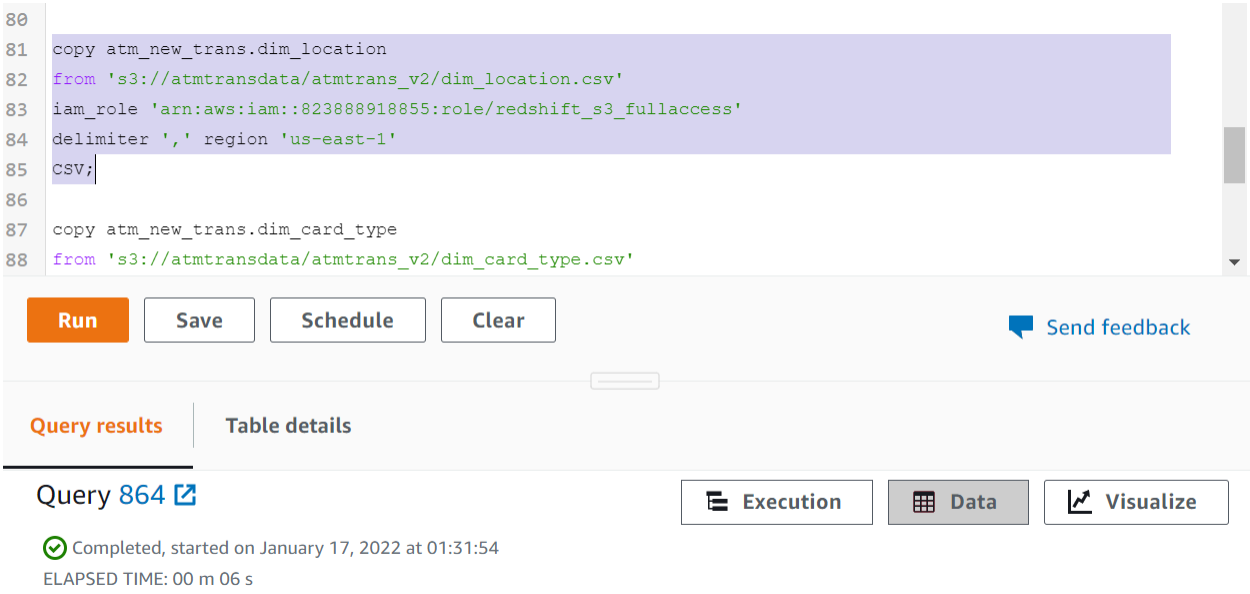
Loading data into a RedShift cluster from Amazon S3 bucket

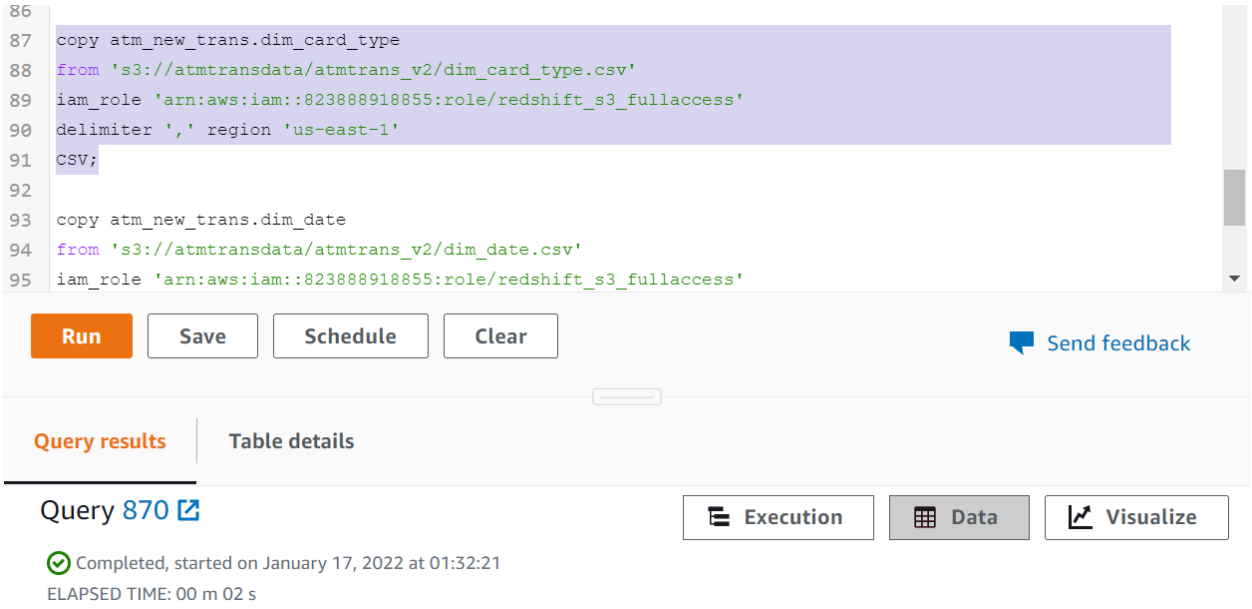
```
copy atm_new_trans.dim_atm
from 's3://atmtransdata/atmtrans_v2/dim_atm.csv'
iam_role 'arn:aws:iam::823888918855:role/redshift_s3_fullaccess'
delimiter ',' region 'us-east-1'
CSV;
```



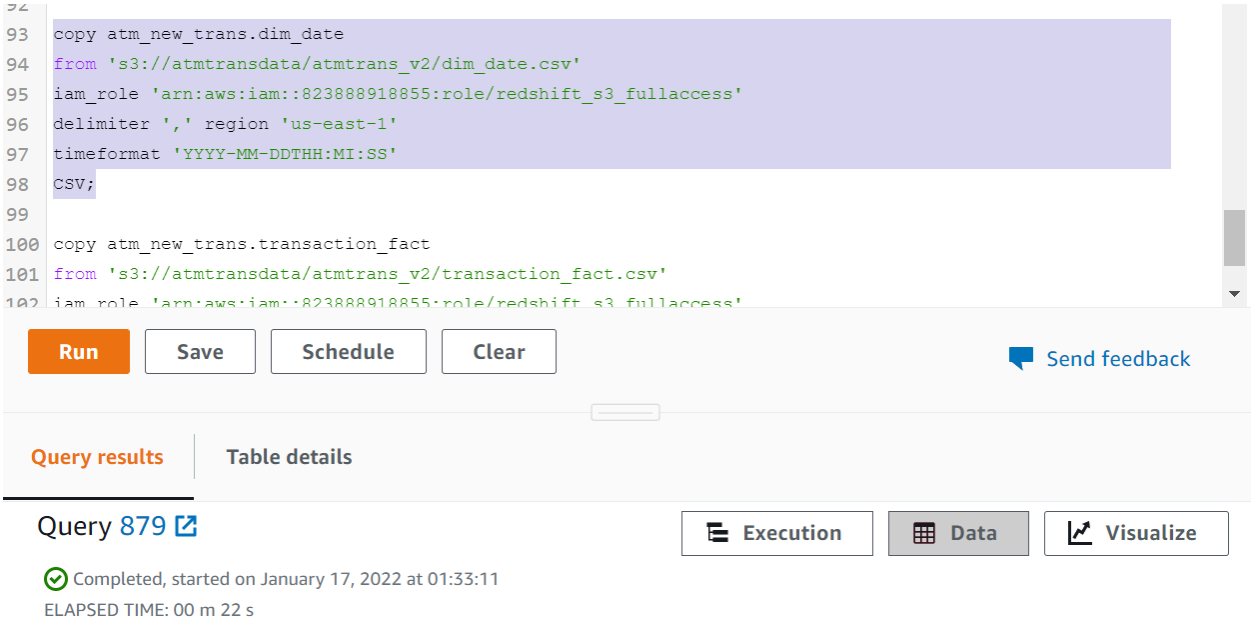
```
copy atm_new_trans.dim_location
from 's3://atmtransdata/atmtrans_v2/dim_location.csv'
iam_role 'arn:aws:iam::823888918855:role/redshift_s3_fullaccess'
delimiter ',' region 'us-east-1'
CSV;
```



```
copy atm_new_trans.dim_card_type
from 's3://atmtransdata/atmtrans_v2/dim_card_type.csv'
iam_role 'arn:aws:iam::823888918855:role/redshift_s3_fullaccess'
delimiter ',' region 'us-east-1'
CSV;
```



```
copy atm_new_trans.dim_date
from 's3://atmtransdata/atmtrans_v2/dim_date.csv'
iam_role 'arn:aws:iam::823888918855:role/redshift_s3_fullaccess'
delimiter ',' region 'us-east-1'
timeformat 'YYYY-MM-DDTHH:MI:SS'
CSV;
```



```
copy atm_new_trans.transaction_fact
from 's3://atmtransdata/atmtrans_v2/transaction_fact.csv'
iam_role 'arn:aws:iam::823888918855:role/redshift_s3_fullaccess'
delimiter ',' region 'us-east-1'
CSV;
```