

Amazon Redshift Cluster:

Amazon Redshift is a fully managed, petabyte-scale data warehouse service in the cloud. You can start with just a few hundred gigabytes of data and scale to a petabyte or more.

An **Amazon Redshift** data warehouse is a collection of computing resources called **nodes**, which are organized into a group called a **cluster**. Each cluster runs an Amazon Redshift engine and contains one or more databases.

An Amazon Redshift cluster consists of **nodes**. A **leader node** and one or more **computing nodes** are present in each **cluster**. The **leader node** receives queries from client applications, parses the queries, and develops query execution plans. The **leader node** then coordinates the parallel execution of these plans with the compute nodes and aggregates the intermediate results from these **nodes**. It then finally returns the results back to the client applications.

Compute nodes run the query execution plans and transmit data among themselves to serve these queries. The intermediate results are sent to the leader node for aggregation before being sent back to the client applications.

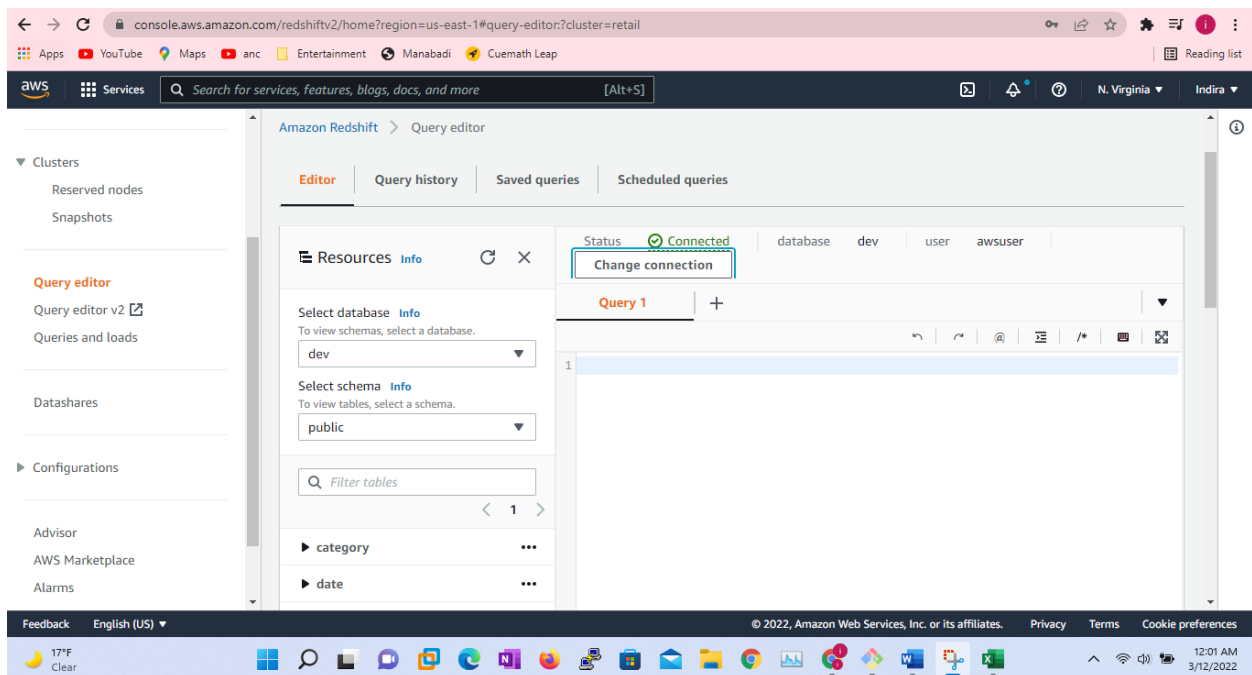


Figure 1 Created the redshift cluster

To get the list of tables

The screenshot shows the AWS Redshift Query Editor interface. The left sidebar contains navigation options: Clusters, Reserved nodes, Snapshots, Query editor (selected), Query editor v2, Queries and loads, Datashares, Configurations, Advisor, AWS Marketplace, and Alarms. The main panel is titled 'Resources' and shows a 'Select database' dropdown set to 'dev' and a 'Select schema' dropdown set to 'public'. Below these is a 'Filter tables' search bar. The 'Query 1' editor contains the following SQL query:

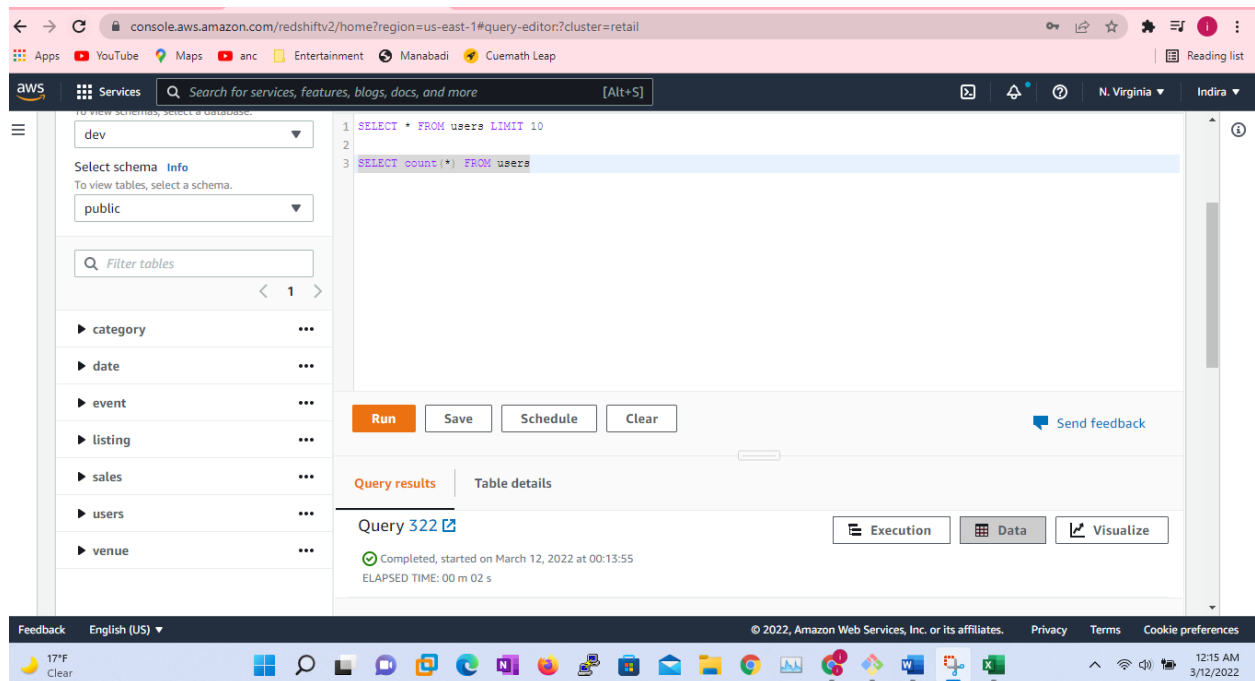
```
1 SELECT * FROM information_schema.tables
2 WHERE table_schema = 'public'
```

At the bottom of the query editor are buttons for 'Run', 'Save', 'Schedule', and 'Clear'. The status bar at the bottom indicates '© 2022, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences'.

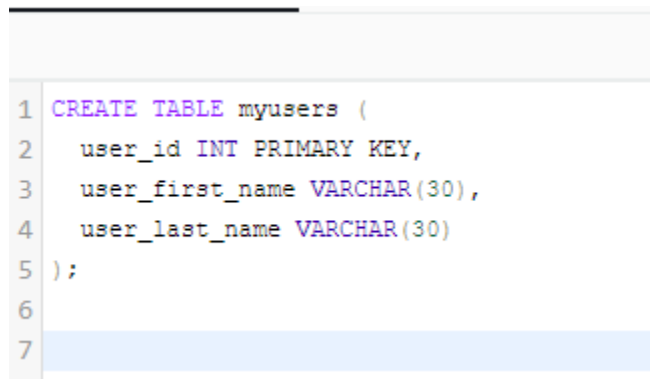
The screenshot shows the AWS Redshift Query Editor interface after the query has been executed. The left sidebar is the same as in the previous screenshot. The main panel is titled 'Query' and shows the execution status: 'Completed, started on March 12, 2022 at 00:07:31' and 'ELAPSED TIME: 00 m 02 s'. Below this is a 'Rows returned (7)' section with an 'Export' button and a search bar. The results are displayed in a table with the following columns: table_catalog, table_schema, table_name, table_type, and self_referencing.

table_catalog	table_schema	table_name	table_type	self_referencing
dev	public	sales	BASE TABLE	
dev	public	listing	BASE TABLE	
dev	public	event	BASE TABLE	
dev	public	date	BASE TABLE	
dev	public	category	BASE TABLE	

Run queries against Redshift Tables using Query Editor



Create Custom tables using Query Editor



< 1 >	
▶ myusers_pkey	...
▶ category	...
▶ date	...
▶ event	...
▶ listing	...
▼ myusers	...
user_id	
user_first_name	
user_last_name	
▶ sales	...
▶ users	...
▶ venue	...

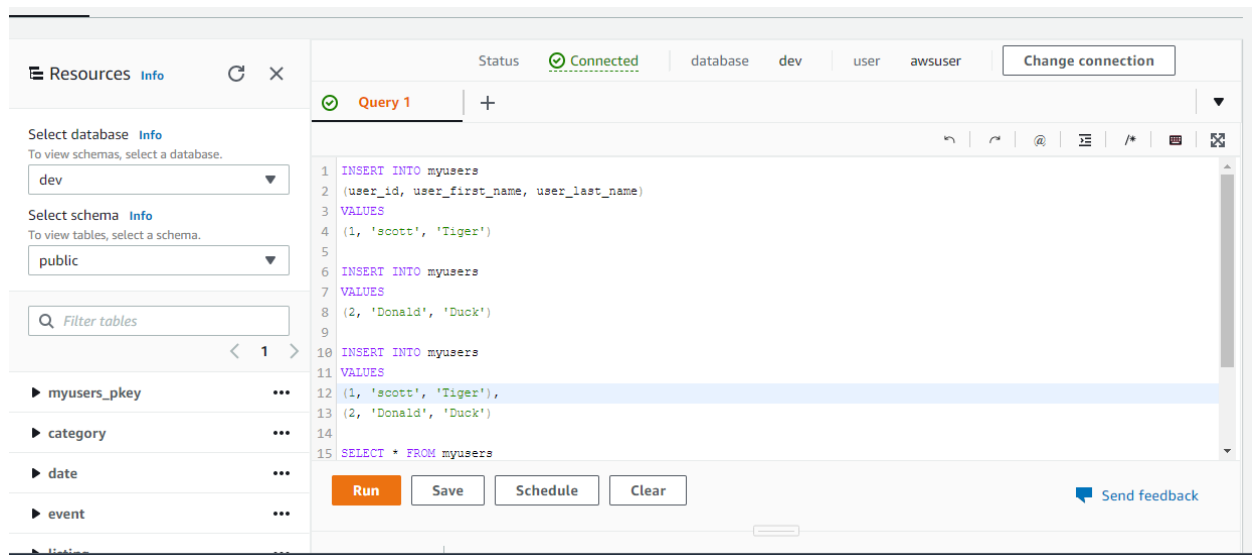
Run

Sa

Query results

Figure 2Myusers table is created

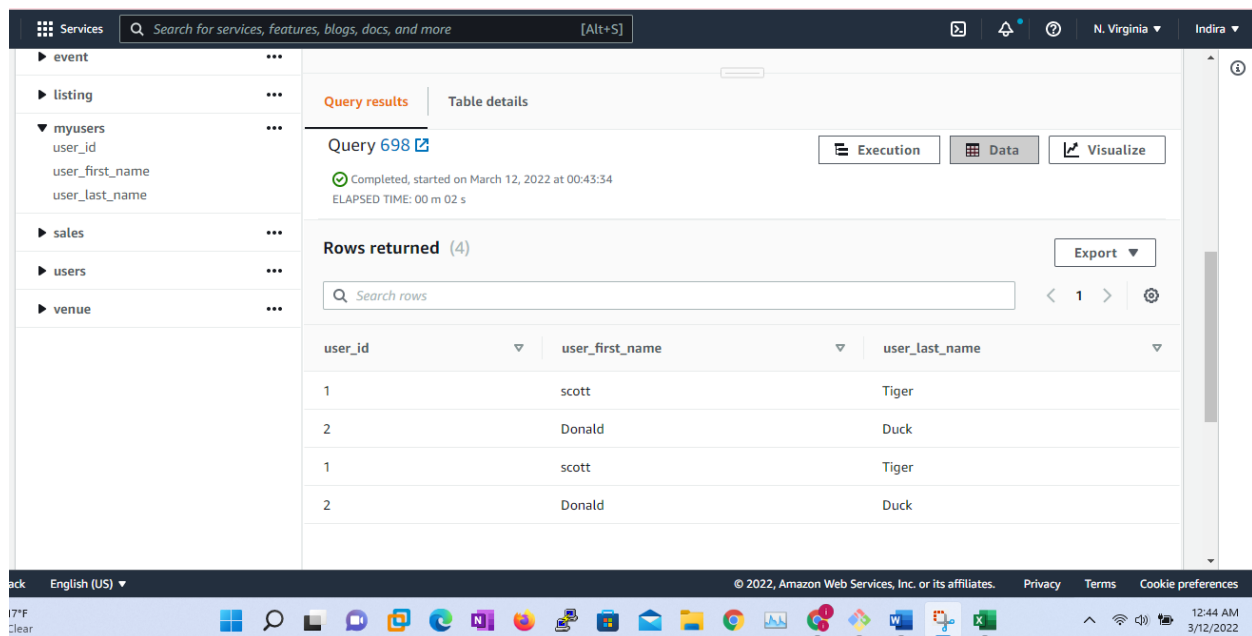
Insert data into the table using insert command



The screenshot shows the Amazon Redshift console interface. On the left, there's a sidebar with 'Resources' and 'Info' tabs. Below 'Resources', there's a 'Select database' dropdown set to 'dev' and a 'Select schema' dropdown set to 'public'. A 'Filter tables' search bar is also present. Below this, a list of tables is shown: 'myusers_pkey', 'category', 'date', and 'event'. The main area displays a SQL query editor for 'Query 1'. The query is as follows:

```
1 INSERT INTO myusers
2 (user_id, user_first_name, user_last_name)
3 VALUES
4 (1, 'scott', 'Tiger')
5
6 INSERT INTO myusers
7 VALUES
8 (2, 'Donald', 'Duck')
9
10 INSERT INTO myusers
11 VALUES
12 (1, 'scott', 'Tiger'),
13 (2, 'Donald', 'Duck')
14
15 SELECT * FROM myusers
```

Below the query, there are buttons for 'Run', 'Save', 'Schedule', and 'Clear'. A 'Send feedback' link is also visible.



The screenshot shows the Amazon Redshift console interface displaying the results of a query. The top bar shows 'Services' and a search bar. The left sidebar shows a list of tables: 'event', 'listing', 'myusers', 'sales', 'users', and 'venue'. The main area displays the 'Query results' for 'Query 698'. The query is completed, started on March 12, 2022 at 00:43:34, and the elapsed time is 00 m 02 s. The results show 4 rows returned. The table has columns 'user_id', 'user_first_name', and 'user_last_name'. The data is as follows:

user_id	user_first_name	user_last_name
1	scott	Tiger
2	Donald	Duck
1	scott	Tiger
2	Donald	Duck

Redshift will not support the primary key constraints, it will create duplicates and it will support not null constraints will enforce. In redshift indexes are not supported.

Update the data in the Tables

```
UPDATE myusers
SET user_first_name = 'Mickey', user_last_name = 'Mouse'
WHERE user_id = 2

SELECT * FROM myusers
```

user_id	user_first_name	user_last_name
1	scott	Tiger
1	scott	Tiger
2	Mickey	Mouse
2	Mickey	Mouse

Figure 3Updated the last two rows with Mickey

To delete the data from tables: Use delete command to delete data from the table.

```
SELECT * FROM myusers

DELETE FROM myusers
WHERE user_id = 1
```

Rows returned (2) Export

< 1 >

user_id	user_first_name	user_last_name
2	Mickey	Mouse
2	Mickey	Mouse

Use TRUNCATE TABLE to clean up the entire table.

Syntax: TRUNCATE TABLE myusers

Delete the cluster:

The screenshot shows the Amazon Redshift console interface. At the top, a green notification bar states: "The following saved query was successfully created: Delete data." Below this, a blue banner announces: "Amazon Redshift query editor v2 is now available". The main content area displays the details for a cluster named "retail".

General information

Property	Value
Cluster identifier	retail
Status	Available
Cluster namespace	80dedcd1-8fed-4b6d-a7d3-a72b414ecdcc
Date created	March 11, 2022, 23:47 (UTC-06:00)
Storage used	-

The "Actions" menu is open, showing the following options:

- Manage cluster
- Resize
- Reboot
- Relocate
- Pause
- Delete
- Defer maintenance
- Configure AQUA
- AQUA
- Not available

Other visible details include the Endpoint: retail.c0jpfxcwnm7.us-east-1..., JDBC URL: jdbc:redshift://retail.c0jpfxcwnm7.us-east-1..., and ODBC URL.