

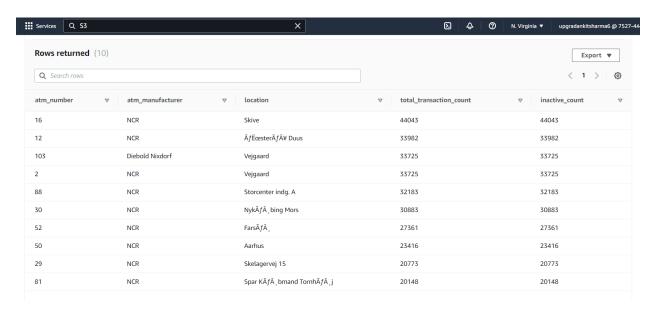


# Solving analytical queries on Redshift Cluster

Here, you have to write the query used for solving the question and the screenshots of the table which is outputted after the query is run on the AWS Redshift Query editor UI.

#### 1. Top 10 ATMs where most transactions are in the 'inactive' state

select a.atm\_number, a.atm\_manufacturer, c.location, count(b.trans\_id) as total\_transaction\_count, count(b.atm\_status) as inactive\_count from etl.dim\_atm a, etl.fact\_atm\_trans b, etl.dim\_location c where a.atm\_id = b.atm\_id and b.weather\_loc\_id = c.location\_id and b.atm\_status = 'Inactive' group by a.atm\_number, a.atm\_manufacturer, b.atm\_status, c.location order by inactive\_count desc limit 10;



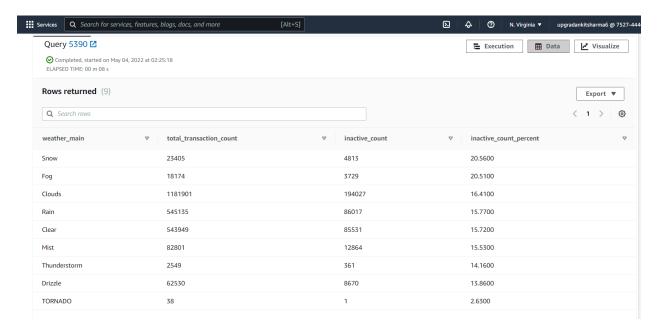




# 2. Number of ATM failures corresponding to the different weather conditions recorded at the time of the transactions

select a.weather\_main, a.total\_transaction\_count, b.inactive\_count, trunc(b.inactive\_count \* 100 / a.total\_transaction\_count, 2)::numeric(10,4) as inactive\_count\_percent from

(select weather\_main, count(trans\_id) as total\_transaction\_count
 from etl.fact\_atm\_trans
 group by weather\_main) a,
 (select weather\_main, isnull(count(trans\_id)::numeric, 0) as inactive\_count
 from etl.fact\_atm\_trans
 where atm\_status = 'Inactive'
 and weather\_main <> "
 group by weather\_main) b
where a.weather\_main = b.weather\_main
order by inactive\_count\_percent desc;

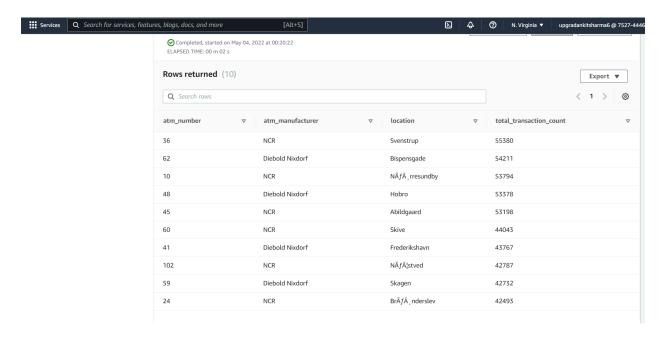






# 3. Top 10 ATMs with the most number of transactions throughout the year

select a.atm\_number, a.atm\_manufacturer, c.location, count(b.trans\_id) as total\_transaction\_count from etl.dim\_atm a, etl.fact\_atm\_trans b, etl.dim\_location c where a.atm\_id = b.atm\_id and b.weather\_loc\_id = c.location\_id group by a.atm\_number, a.atm\_manufacturer, c.location order by total\_transaction\_count desc limit 10;





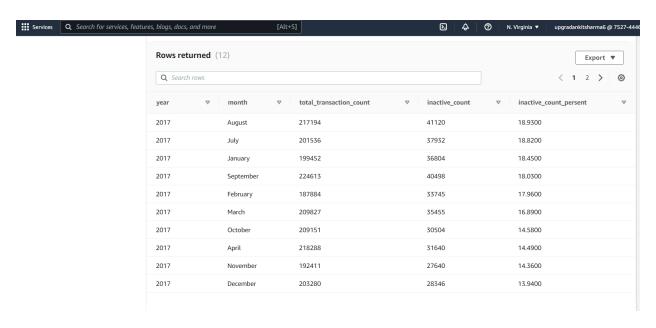


### 4. Number of overall ATM transactions going inactive per month for each month

select c.year, c.month, c.total\_transaction\_count, d.inactive\_count, trunc(d.inactive\_count \* 100 / c.total\_transaction\_count, 2)::numeric(10,4) as inactive\_count\_persent from

(select a.year, a.month, count(b.trans\_id) as total\_transaction\_count
 from etl.dim\_date a, etl.fact\_atm\_trans b
 where a.date\_id = b.date\_id
 group by a.year, a.month) c,

(select a.year, a.month, count(b.trans\_id)::numeric as inactive\_count
 from etl.dim\_date a, etl.fact\_atm\_trans b
 where a.date\_id = b.date\_id
 and b.atm\_status = 'Inactive'
 group by a.year, a.month) d
where c.year = d.year
and c.month = d.month
order by inactive\_count\_persent desc;

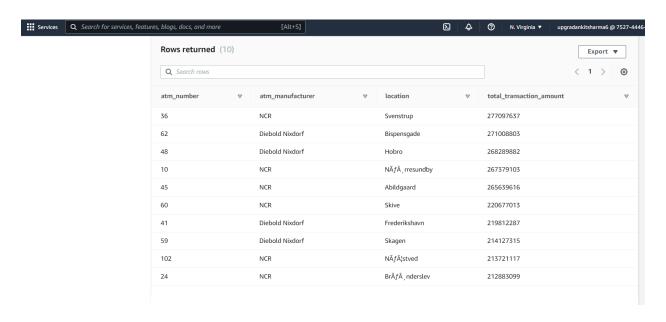






## 5. Top 10 ATMs with the highest total withdrawn amount throughout the year

select a.atm\_number, a.atm\_manufacturer, c.location, sum(b.transaction\_amount) as total\_transaction\_amount from etl.dim\_atm a, etl.fact\_atm\_trans b, etl.dim\_location c where a.atm\_id = b.atm\_id and b.weather\_loc\_id = c.location\_id group by a.atm\_number, a.atm\_manufacturer, c.location order by total\_transaction\_amount desc limit 10;







### 6. Number of failed ATM transactions across various card types

select c.card\_type, c.total\_transaction\_count, d.inactive\_count, trunc(100 \* d.inactive\_count / c.total\_transaction\_count, 2)::numeric(10,4) as inactive\_count\_percent from

(select a.card\_type, count(b.trans\_id) as total\_transaction\_count
from etl.dim\_card a, etl.fact\_atm\_trans b
 where a.card\_type\_id = b.card\_type\_id
 group by a.card\_type) c,
 (select a.card\_type, count(b.trans\_id)::numeric as inactive\_count
 from etl.dim\_card a, etl.fact\_atm\_trans b
 where a.card\_type\_id = b.card\_type\_id
 and b.atm\_status = 'lnactive'
 group by a.card\_type) d
where c.card\_type = d.card\_type
order by inactive\_count\_percent desc;

