



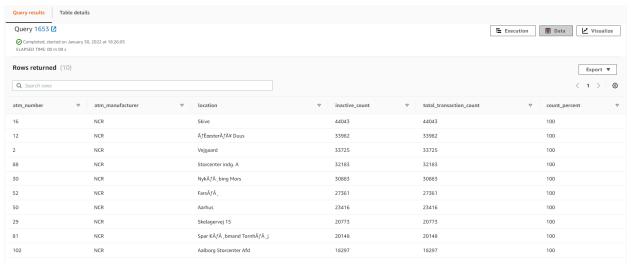
## Solving analytical queries on Redshift Cluster

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

## <Query>

select d.atm\_number,d.atm\_manufacturer,l.location,count(atm\_status) Inactive\_count,count(f.atm\_id) total\_transaction\_count, (Inactive\_count/total\_transaction\_count \* 100) count\_percent from fact\_atm\_trans f INNER JOIN dim\_atm d on (f.atm\_id=d.atm\_id) INNER JOIN dim\_location I on (l.location\_id=d.atm\_location\_id) where atm\_status='Inactive' group by d.atm\_number,d.atm\_manufacturer,l.location order by Inactive\_count desc limit 10



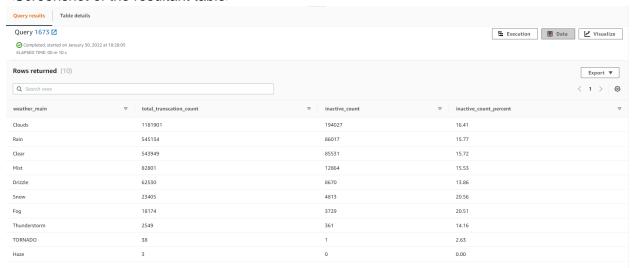




# 2. Number of ATM failures corresponding to the different weather conditions recorded at the time of the transactions

## <Query>

select f.weather\_main,count(f.trans\_id) total\_transcation\_count,count(CASE WHEN f.atm\_status='Inactive' THEN 1 END) inactive\_count, (Cast(((inactive\_count \*100.00)/total\_transcation\_count) as decimal(18,2))) inactive\_count\_percent from fact\_atm\_trans f where f.weather\_main ~ '^[a-z,A-Z]' group by f.weather\_main order by inactive\_count desc



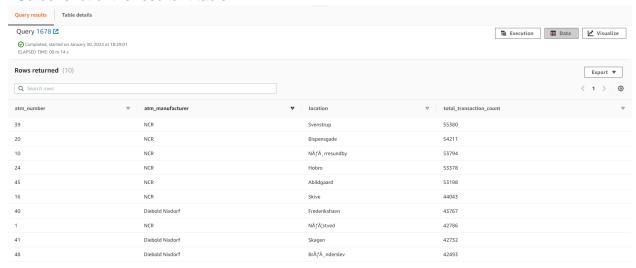




## 3. Top 10 ATMs with the most number of transactions throughout the year

## <Query>

select d.atm\_number,d.atm\_manufacturer,l.location,count(f.atm\_id) total\_transaction\_count from fact\_atm\_trans f
INNER JOIN dim\_atm d on (f.atm\_id=d.atm\_id)
INNER JOIN dim\_location I on (l.location\_id=d.atm\_location\_id)
group by d.atm\_number,d.atm\_manufacturer,l.location
order by total\_transaction\_count desc limit 10



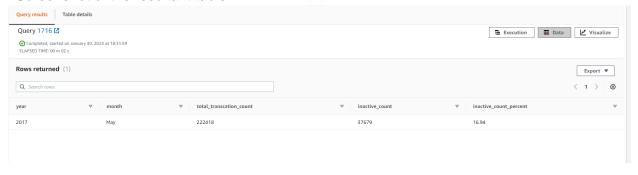




## 4. Number of overall ATM transactions going inactive per month for each month

## <Query>

select d.year,d.month,count(f.trans\_id) total\_transcation\_count,count(CASE WHEN f.atm\_status='Inactive' THEN 1 END) inactive\_count, (Cast(((inactive\_count \*100.00)/total\_transcation\_count) as decimal(18,2))) inactive\_count\_percent from fact\_atm\_trans f
INNER JOIN dim\_date d on(f.date\_id=d.date\_id)
group by d.month,d.year
order by month



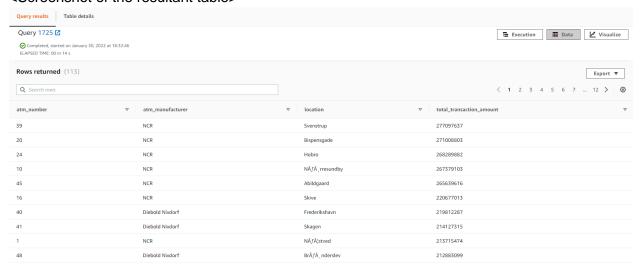




## 5. Top 10 ATMs with the highest total withdrawn amount throughout the year

## <Query>

select d.atm\_number,d.atm\_manufacturer,l.location,sum(transaction\_amount) total\_transaction\_amount from fact\_atm\_trans f INNER JOIN dim\_atm d on (f.atm\_id=d.atm\_id) INNER JOIN dim\_location l on (l.location\_id=d.atm\_location\_id) group by f.atm\_id,d.atm\_number,d.atm\_manufacturer,l.location order by total\_transaction\_amount desc



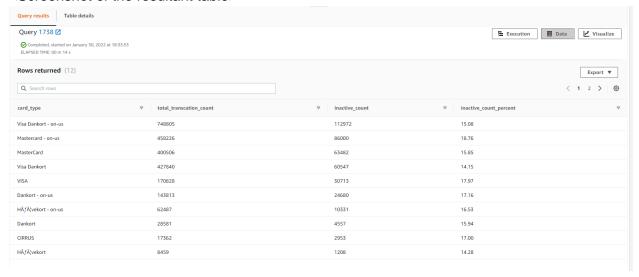




## 6. Number of failed ATM transactions across various card types

### <Query>

select d.card\_type,count(f.trans\_id) total\_transcation\_count,count(CASE WHEN f.atm\_status='Inactive' THEN 1 END) inactive\_count, (Cast(((inactive\_count \*100.00)/total\_transcation\_count) as decimal(18,2))) inactive\_count\_percent from fact\_atm\_trans f
INNER JOIN dim\_card\_type d on(f.card\_type\_id=d.card\_type\_id)
group by d.card\_type
order by inactive\_count desc



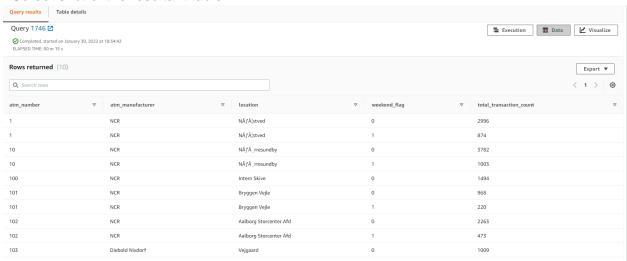




7. Number of transactions happening on an ATM on weekdays and on weekends throughout the year. Order this by the ATM\_number, ATM\_manufacturer, location, weekend\_flag and then total\_transaction\_count

## <Query>

select d.atm\_number,d.atm\_manufacturer,l.location,
CASE WHEN dd.weekday='Sunday' or dd.weekday='Saturday' then 1 ELSE 0 END as
weekend\_flag,
count(f.trans\_id) total\_transaction\_count
from fact\_atm\_trans f
INNER JOIN dim\_atm d on (f.atm\_id=d.atm\_id)
INNER JOIN dim\_location I on (l.location\_id=d.atm\_location\_id)
INNER JOIN dim\_date dd on (f.date\_id=dd.date\_id)
group by d.atm\_number,d.atm\_manufacturer,l.location,weekend\_flag
order by d.atm\_number,d.atm\_manufacturer,l.location,weekend\_flag,total\_transaction\_count
desc limit 10







## 8. Most active day in each ATMs from location "Vejgaard"

<Query>

select a.atm\_number,a.atm\_manufacturer,l.location,dd.weekday,count(f.trans\_id)

transaction\_count

from fact\_atm\_trans f

INNER JOIN dim\_atm a on (f.atm\_id=a.atm\_id)

INNER JOIN dim\_location I on (I.location\_id=f.weather\_loc\_id)

INNER JOIN dim\_date dd on (dd.date\_id=f.date\_id)

where I.location='Vejgaard'

group by a.atm\_number,a.atm\_manufacturer,l.location,dd.weekday

order by transaction\_count desc,dd.weekday

