

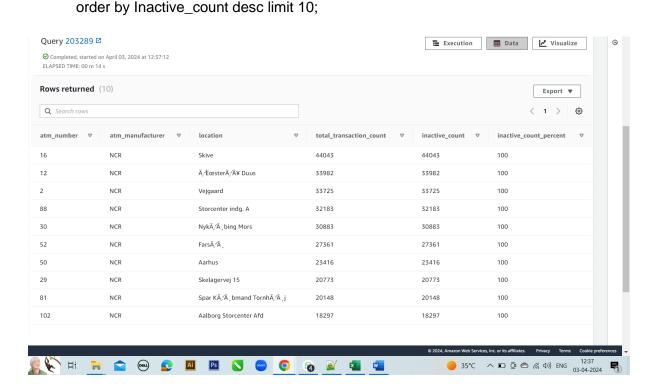


Solving analytical queries on Redshift Cluster

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
atm_number,
atm_manufacturer,
location,
count(trans_id) as total_transaction_count,
sum(case when atm_status='Inactive' then 1 else 0 end) as Inactive_count,
(Inactive_count/total_transaction_count)*100 as Inactive_count_percent
from
atm_data.fact_atm_trans f left join atm_data.dim_atm a on (f.atm_id = a.atm_id)
                                             left join atm_data.dim_location d on
(f.weather_loc_id = d.location_id)
where
atm_status = 'Inactive'
group by
atm number,
atm_manufacturer,
location
```







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

with weather as (

select

weather_main,

count(trans id) as total transaction count,

sum(case when atm_status='Inactive' then 1 else 0 end) as Inactive_count

from

atm_data.fact_atm_trans

where

weather main != "

group by

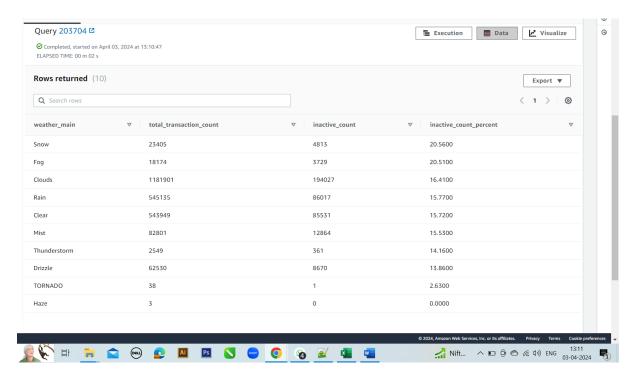
weather_main)

Select *,

case when coalesce(inactive_count, 0) = 0 then 0.0000 else trunc((cast(inactive_count as numeric(10,4))/total_transaction_count)*100, 2) end as inactive_count_percent

from weather

order by inactive_count_percent desc;







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

select

atm_number,

atm_manufacturer,

location,

count(trans id) as total transaction count

from

atm_data.fact_atm_trans f left join atm_data.dim_atm a on (f.atm_id = a.atm_id)

left join atm_data.dim_location d on

(f.weather_loc_id = d.location_id)

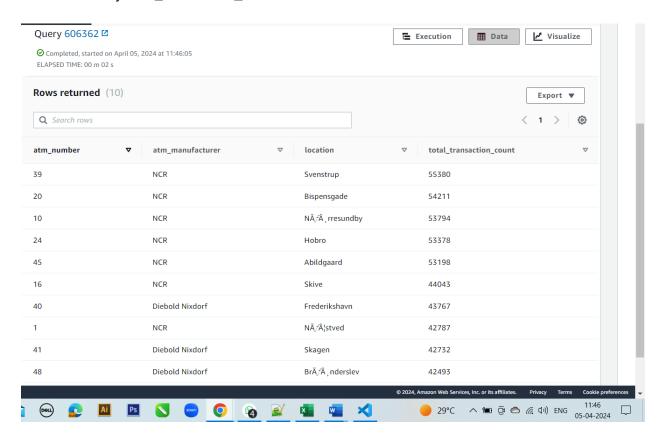
group by

atm_number,

atm_manufacturer,

location

order by total_transaction_count desc





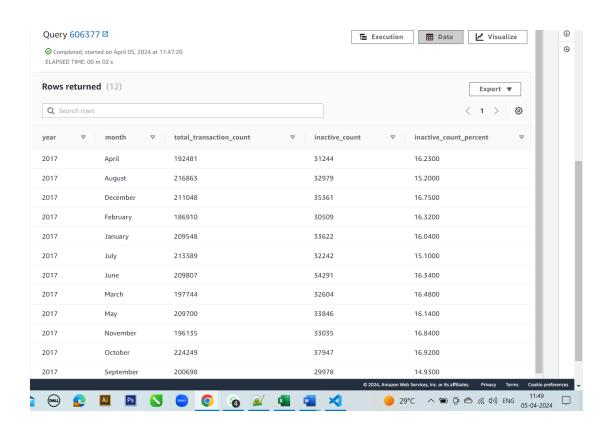


4. Number of overall ATM transactions going inactive per month for each month

```
with date as (
select
year,
month,
count(trans_id) as total_transaction_count,
sum(case when atm_status='Inactive' then 1 else 0 end) as Inactive_count
from atm_data.fact_atm_trans f left join atm_data.dim_date d on (f.date_id=d.date_id)
group by
year,
month
)

Select *,
    case when coalesce(inactive_count, 0) = 0 then 0.0000 else
trunc((cast(inactive_count as numeric(10,4))/total_transaction_count)*100, 2) end as
inactive_count_percent
```

from date order by year, month;







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

select

atm_number,

atm_manufacturer,

location,

sum(transaction amount) as total transaction amount

from

atm_data.fact_atm_trans f left join atm_data.dim_atm a on (f.atm_id = a.atm_id)

left join atm_data.dim_location d on

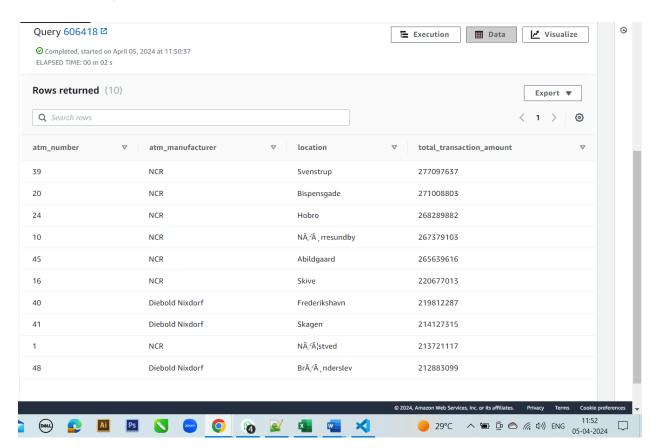
(f.weather_loc_id = d.location_id)

group by atm_number,

atm_manufacturer,

location

order by total_transaction_amount desc limit 10;







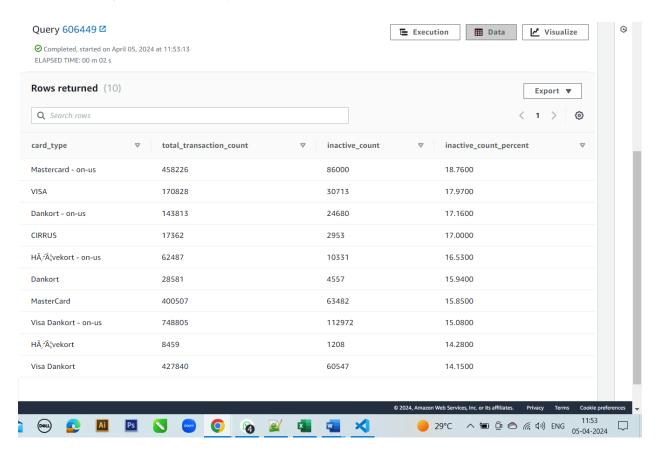
6. Number of failed ATM transactions across various card types.

```
with card as (
select
card_type,
count(trans_id) as total_transaction_count,
sum(case when atm_status='Inactive' then 1 else 0 end) as Inactive_count
from atm_data.fact_atm_trans f left join atm_data.dim_card_type d on
(f.card_type_id=d.card_type_id)
group by
card_type
)
```

Select *,

case when coalesce(inactive_count, 0) = 0 then 0.0000 else trunc((cast(inactive_count as numeric(10,4))/total_transaction_count)*100, 2) end as inactive_count_percent

from card order by inactive_count_percent desc limit 10;







8. 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

select

atm_number,

atm manufacturer,

location,

(case when d.weekday in ('Saturday', 'Sunday') then 1 else 0 end) as weekend_flag, count(trans_id) as total_transaction_count

from atm_data.fact_atm_trans f left join atm_data.dim_atm a on (f.atm_id = a.atm_id)

left join atm_data.dim_location dl on

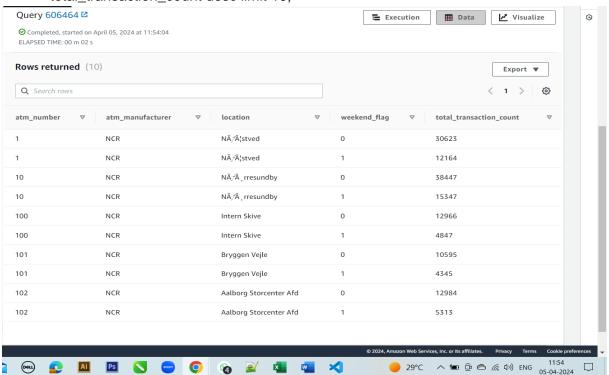
(f.weather_loc_id = dl.location_id)

left join atm_data.dim_date d on

(f.date_id = d.date_id) group by atm_number, atm_manufacturer, location, weekend_flag

order by atm_number, atm_manufacturer, location, weekend_flag,

total_transaction_count desc limit 10;







9. Most active day in each ATMs from location "Vejgaard"

```
with atm_weekday as (
select
atm_number,
atm_manufacturer,
location.
weekday,
count(trans_id) as total_transaction_count
from atm_data.fact_atm_trans f left join atm_data.dim_atm a on (f.atm_id = a.atm_id)
                                               left join atm_data.dim_location dl on
(f.weather_loc_id = dl.location_id)
                                                   left join atm_data.dim_date d on
(f.date_id = d.date_id)
where
dl.location = 'Vejgaard'
GROUP BY
atm_number,
atm_manufacturer,
location,
weekday),
max_weekday as (
select weekday
from atm_weekday
where total_transaction_count = (select max(total_transaction_count) from
atm_weekday)
limit 1
select
from atm weekday
where weekday = (select weekday from max_weekday)
order by total_transaction_count;
```





