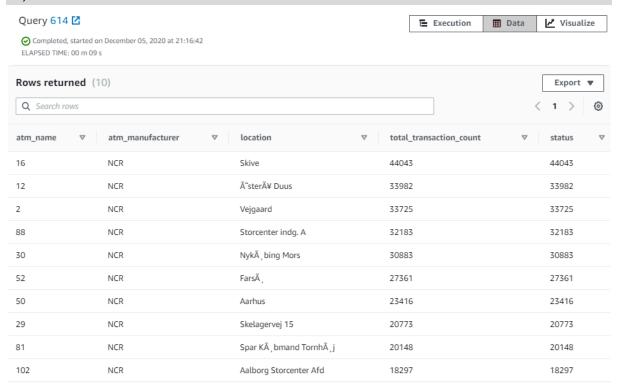
Solving analytical queries on RedShift Cluster

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

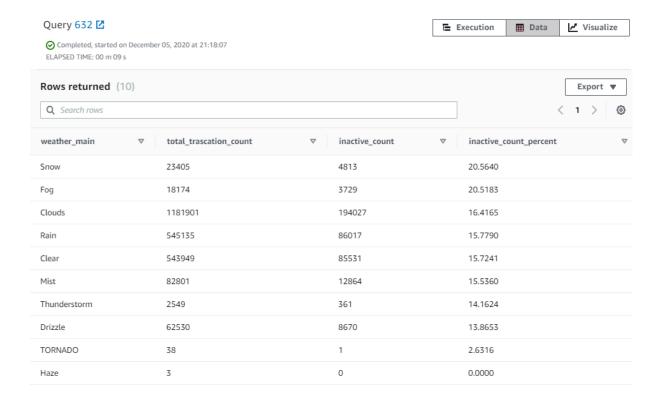
select da.atm number as

atm_name,da.atm_manufacturer,dl.location,count(f.trans_id)total_transaction_count,count(f.atm_s tatus)status from atmtransactions.fact_atm_trans f join atmtransactions.dim_atm da on f.atm_id=da.atm_id join atmtransactions.dim_location dl on f.weather_loc_id=dl.location_id where f.atm_status='Inactive' group by atm_name,atm_manufacturer,location order by status desc limit 10;



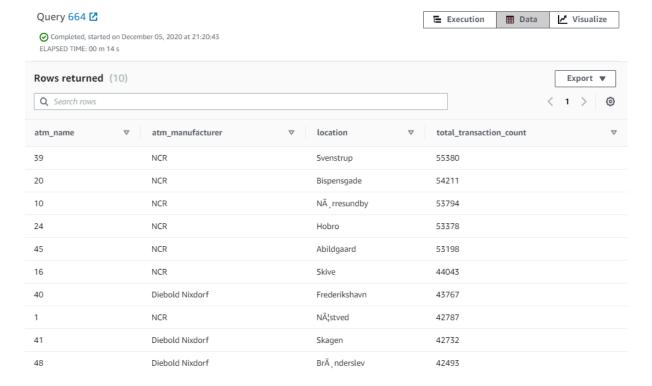
2. Number of ATM failures corresponding to the different weather conditions recorded at the time of the transactions

select f.weather_main, count(f.atm_status) as total_trascation_count,sum(case when f.atm_status = 'Inactive' then 1 else 0 end) as inactive_count,round((1.0*(100 * sum(case when f.atm_status = 'Inactive' then 1 else 0 end))/count(f.atm_status)),4) as inactive_count_percent from atmtransactions.fact_atm_trans f group by f.weather_main having f.weather_main <> " order by inactive_count_percent desc;



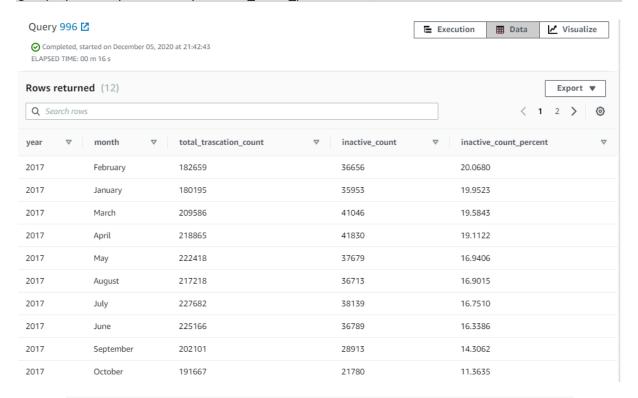
3. Top 10 ATMs with the most number of transactions throughout the year

select da.atm_number as atm_name,da.atm_manufacturer,dl.location,count(f.trans_id) as total_transaction_count from atmtransactions.fact_atm_trans f join atmtransactions.dim_atm da on f.atm_id = da.atm_id join atmtransactions.dim_location dl on f.weather_loc_id = dl.location_id group by atm_name,da.atm_manufacturer,dl.location order by total_transaction_count desc limit 10;



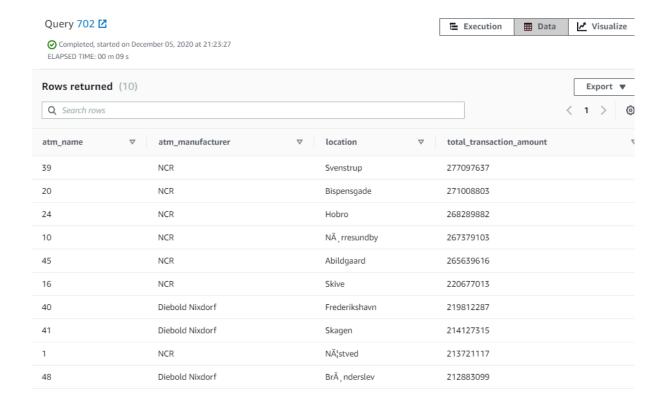
4. Number of overall ATM transactions going inactive per month for each month

select dd.year, dd.month,count(f.atm_status) as total_trascation_count,sum(case when f.atm_status = 'Inactive' then 1 else 0 end) as inactive_count,round((1.0*(100 * sum(case when f.atm_status = 'Inactive' then 1 else 0 end))/count(f.atm_status)),4) as inactive_count_percent from atmtransactions.fact_atm_trans f, atmtransactions.dim_date dd where f.date_id = dd.date_id group by month,year order by inactive_count_percent desc;



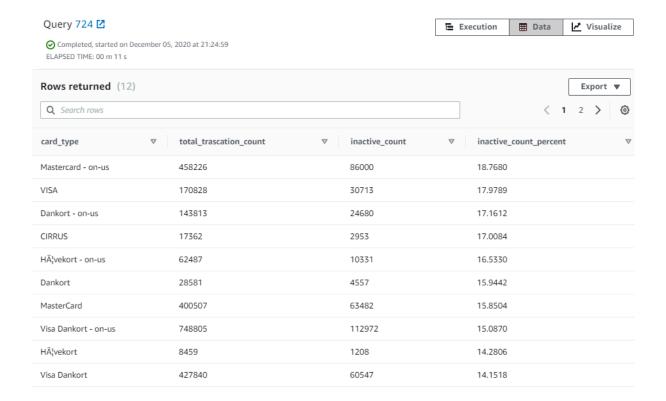
5. Top 10 ATMs with the highest total amount withdrawn throughout the year

select da.atm_number as atm_name,da.atm_manufacturer,dl.location,sum(f.transaction_amount) as total_transaction_amount from atmtransactions.fact_atm_trans f join atmtransactions.dim_atm da on f.atm_id = da.atm_id join atmtransactions.dim_location dl on f.weather_loc_id = dl.location_id group by atm_name,da.atm_manufacturer,dl.location order by total_transaction_amount desc limit 10;



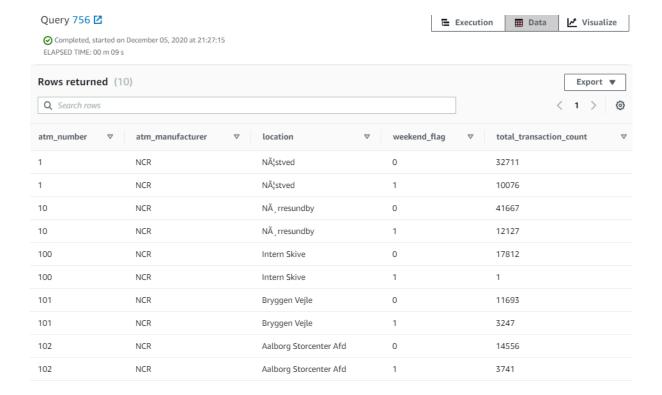
6. Number of failed ATM transactions across various card types

select dc.card_type, count(f.atm_status) as total_trascation_count,sum(case when f.atm_status = 'Inactive' then 1 else 0 end) as inactive_count,round((1.0*(100 * sum(case when f.atm_status = 'Inactive' then 1 else 0 end))/count(f.atm_status)),4) as inactive_count_percent from atmtransactions.fact_atm_trans f, atmtransactions.dim_card_type dc where f.card_type_id = dc.card_type_id group by dc.card_type order by inactive_count_percent desc;



7. Top 10 records with the number of transactions ordered by the ATM_number, ATM_manufacturer, location, weekend_flag and then total_transaction_count, on weekdays and on weekends throughout the year

select da.atm_number,da.atm_manufacturer,dl.location,(case when dd.weekday in('Sunday','Saturday') then 1 else 0 end) as weekend_flag,count(f.trans_id) as total_transaction_count from atmtransactions.fact_atm_trans f join atmtransactions.dim_atm da on da.atm_id=f.atm_id join atmtransactions.dim_location dl on f.weather_loc_id=dl.location_id join atmtransactions.dim_date dd on f.date_id=dd.date_id group by da.atm_number,da.atm_manufacturer,dl.location,weekend_flag order by da.atm_number,da.atm_manufacturer,dl.location,weekend_flag, total_transaction_count limit 10;



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

select da.atm_number as

atm_number,da.atm_manufacturer,dl.location,dd.weekday,count(f.transaction_amount) as total_transaction_count from atmtransactions.fact_atm_trans f join atmtransactions.dim_atm da on f.atm_id = da.atm_id join atmtransactions.dim_location dl on f.weather_loc_id = dl.location_id join atmtransactions.dim_date dd on f.date_id = dd.date_id where dl.location = 'Vejgaard' and dd.weekday = (select weekday from atmtransactions.dim_date group by weekday order by count(weekday) desc limit 1) group by atm_number,da.atm_manufacturer,dl.location,dd.weekday order by total_transaction_count asc limit 2;

