

Analytical Queries

Q1. Top 10 ATMs where most transactions are in the 'inactive' state.

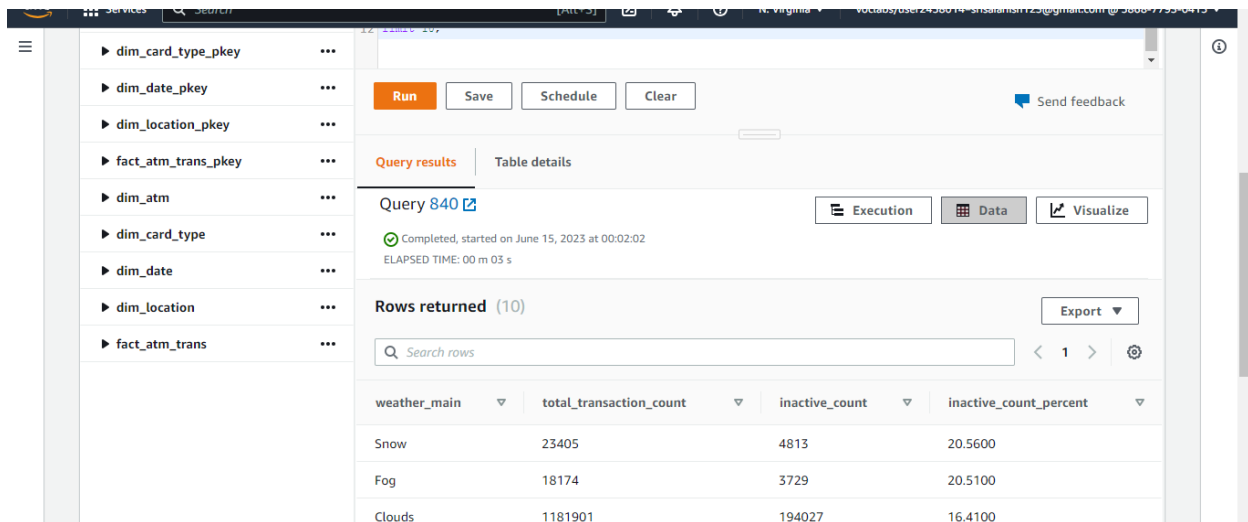
```
select a.atm_number, a.atm_manufacturer, l.location,
count(trans_id) as total_transaction_count,
sum(case when atm_status = 'Inactive' then 1 else 0 end) as
inactive_transaction_count,
(inactive_transaction_count/total_transaction_count)*100 as count_percent
from atm_data.fact_atm_trans f, atm_data.dim_atm a, atm_data.dim_location l
where f.atm_id = a.atm_id and a.atm_location_id = l.location_id
group by a.atm_number, a.atm_manufacturer, l.location
having count_percent > 50
order by inactive_transaction_count desc
limit 10;
```

The screenshot shows the AWS CloudShell interface with a query executed. The query results are displayed in a table with 6 columns: atm_number, atm_manufacturer, location, total_transaction_count, inactive_count, and count_percent. The results are sorted by inactive_count in descending order, showing the top 10 ATMs.

atm_number	atm_manufacturer	location	total_transaction_count	inactive_count	count_percent
16	NCR	Skive	88086	88086	100
12	NCR	ÅfEøesterÅfÅ ¥ Duus	67964	67964	100
2	NCR	Vejgaard	67450	67450	100
88	NCR	Storcenter indg. A	64366	64366	100
30	NCR	NykÅfÅ, bing Mors	61766	61766	100
52	NCR	FarsÅfÅ,	54722	54722	100
50	NCR	Aarhus	46832	46832	100

Q2. Number of ATM failures corresponding to the different weather conditions recorded at the time of the transactions.

```
select f.weather_main,
count(trans_id) as total_transaction_count,
sum(case when atm_status = 'Inactive' then 1 else 0 end) as inactive_count,
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 atm_data.fact_atm_trans f
where f.weather_main != ''
group by f.weather_main
order by inactive_count_percent desc
limit 10;
```



Query results

Query 840

Completed, started on June 15, 2023 at 00:02:02
ELAPSED TIME: 00 m 03 s

Rows returned (10)

weather_main	total_transaction_count	inactive_count	inactive_count_percent
Snow	23405	4813	20.5600
Fog	18174	3729	20.5100
Clouds	1181901	194027	16.4100

Q3. Top 10 ATMs with the most number of transactions throughout the year.

```
select a.atm_number, a.atm_manufacturer, l.location,
count(trans_id) as total_count
from atm_data.fact_atm_trans f, atm_data.dim_atm a, atm_data.dim_location l
where f.atm_id = a.atm_id and a.atm_location_id = l.location_id
group by a.atm_number, a.atm_manufacturer, l.location
order by total_count desc
limit 10;
```

Query results

Query 857

Completed, started on June 15, 2023 at 00:03:30
ELAPSED TIME: 00 m 13 s

Rows returned (10)

atm_number	atm_manufacturer	location	total_transaction_count
39	NCR	Svenstrup	110760
20	NCR	Bispensgade	108422
10	NCR	NÅfÅ, rresundby	107588
24	NCR	Hobro	106756
45	NCR	Abildgaard	106396

Q4. Number of overall ATM transactions going inactive per month for each month.

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

Query results

Query 873

Completed, started on June 15, 2023 at 00:04:40
ELAPSED TIME: 00 m 02 s

Rows returned (12)

year	month	total_transaction_count	inactive_count	inactive_count_percent
2017	April	218865	41830	19.1100
2017	August	217218	36713	16.9000
2017	December	197048	20476	10.3900
2017	February	182659	36656	20.0600
2017	January	180195	35953	19.9500
2017	July	227682	38139	16.7500

Q5. Top 10 ATMs with the highest total withdrawn amount throughout the year.

```

select a.atm_number, a.atm_manufacturer, l.location,
sum(transaction_amount) as total_transaction_amount
from atm_data.fact_atm_trans f, atm_data.dim_atm a, atm_data.dim_location l
where f.atm_id = a.atm_id and a.atm_location_id = l.location_id
group by a.atm_number, a.atm_manufacturer, l.location
order by total_transaction_amount desc
limit 10;

```

fact_atm_trans_pkey ...

dim_atm ...

dim_card_type ...

dim_date ...

dim_location ...

fact_atm_trans ...

Query results Table details

Query 887

Completed, started on June 15, 2023 at 00:05:32
ELAPSED TIME: 00 m 08 s

Execution Data Visualize

Rows returned (10)

Export

Search rows

atm_number	atm_manufacturer	location	total_transaction_amount
39	NCR	Svenstrup	554195274
20	NCR	Bispensgade	542017606
24	NCR	Hobro	536579764
10	NCR	NÅfÅ_resundby	534758206
45	NCR	Abildgaard	531279232

Q6. Number of failed ATM transactions across various card types

```

select ct.card_type,
count(trans_id) as total_transaction_count,
sum(case when atm_status = 'Inactive' then 1 else 0 end) as inactive_count,
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 atm_data.fact_atm_trans f, atm_data.dim_card_type ct
where f.card_type_id = ct.card_type_id
group by ct.card_type
order by inactive_count_percent desc
limit 10;

```

aws	Services	Search	[Alt+S]	N. Virginia	voclabs/user2458014=srisaish123@gmail.com @ 5868-7793-0415
fact_atm_trans_pkey	...	Query results	Table details		
dim_atm	...	Query 901	Execution	Data	Visualize
dim_card_type	...	Completed, started on June 15, 2023 at 00:06:07			
dim_date	...	ELAPSED TIME: 00 m 02 s			
dim_location	...	Rows returned (10)			Export
fact_atm_trans	...	Search rows			
		card_type	total_transaction_count	inactive_count	inactive_count_percent
		Mastercard - on-us	458226	86000	18.7600
		VISA	170828	30713	17.9700
		Dankort - on-us	143813	24680	17.1600
		CIRRUS	17362	2953	17.0000
		HÄfÄ'vekort - on-us	62487	10331	16.5300
		Dankort	28581	4557	15.9400

Q7. 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 a.atm_number, a.atm_manufacturer, l.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, atm_data.dim_atm a, atm_data.dim_location l,
atm_data.dim_date d
where f.atm_id = a.atm_id and a.atm_location_id = l.location_id and f.date_id
= d.date_id
group by a.atm_number, a.atm_manufacturer, l.location, weekend_flag
order by a.atm_number, a.atm_manufacturer, l.location, weekend_flag,
total_transaction_count
limit 10;
```

The screenshot shows the AWS Redshift console interface. On the left, a sidebar lists database schemas: fact_atm_trans_pkey, dim_atm, dim_card_type, dim_date, dim_location, and fact_atm_trans. The main panel displays 'Query results' for 'Query 910'. It indicates the query is 'Completed, started on June 15, 2023 at 00:06:58' with an 'ELAPSED TIME: 00 m 14 s'. Below this, a table shows 'Rows returned (10)'. The table has columns: atm_number, atm_manufacturer, location, weekend_flag, and total_transaction_count. The data rows are as follows:

atm_number	atm_manufacturer	location	weekend_flag	total_transaction_count
1	NCR	NÃfÃstved	0	65422
1	NCR	NÃfÃstved	1	20152
10	NCR	NÃfÃ, rresundby	0	83334
10	NCR	NÃfÃ, rresundby	1	24254
100	NCR	Intern Skive	0	35624
100	NCR	Intern Skive	1	2

Q 8. Most active day in each ATMs from location "Veigaard".

```
select a.atm_number, a.atm_manufacturer, l.location, d.weekday,
count(trans_id) as total_transaction_count
from atm_data.fact_atm_trans f inner join atm_data.dim_atm a on f.atm_id =
a.atm_id
inner join atm_data.dim_location l on a.atm_location_id = l.location_id
inner join atm_data.dim_date d on f.date_id = d.date_id
where l.location = 'Veigaard' and d.weekday in
(
select d.weekday
from atm_data.fact_atm_trans f inner join atm_data.dim_date d
on f.date_id = d.date_id
inner join atm_data.dim_location l on f.weather_loc_id = l.location_id
where l.location = 'Veigaard'
group by d.weekday
order by count(f.trans_id) desc
limit 1
)
group by a.atm_number, a.atm_manufacturer, l.location, d.weekday
order by total_transaction_count;
```

aws

Services

Search

[Alt+S]

N. Virginia

voclabs/user2458014=srisaianish123@gmail.com @ 5868-7793-0415

dim_card_type_pkey

...

dim_date_pkey

...

dim_location_pkey

...

fact_atm_trans_pkey

...

dim_atm

...

dim_card_type

...

dim_date

...

dim_location

...

fact_atm_trans

...

1/ order by total_transaction_count;

Run

Save

Schedule

Clear

Send feedback

Query results

Table details

Query 931

Execution

Data

Visualize

Completed, started on June 15, 2023 at 00:08:17

ELAPSED TIME: 00 m 09 s

Rows returned (2)

Export

Search rows

< 1 >

atm_number	atm_manufacturer	location	weekday	total_transaction_count
103	Diebold Nixdorf	Vejgaard	Friday	4757
2	NCR	Vejgaard	Friday	6290

CloudShell

Feedback

Language

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