



# Visualise a Relational Database



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Untitled - MySQL Workbench

Administration Schemas Query 1 QuickSightDatabase - Schema Limit to 1000 rows

```
1 SELECT
2 *
3 FROM
4 newhire
```

Result Grid Filter Rows: Search Edit: Export/Import: Result Grid Form Editor Field Details

empno	ename	job	manager	hiredate	salary	comm	deptno
1	JOHNSON	ADMIN	6	1980-12-17 00:00:00	18000.00	NULL	4
2	HARDING	MANAGER	9	1985-01-02 00:00:00	32000.00	100.00	5
3	ADAMS	SALES_I	2	1985-01-02 00:00:00	12000.00	500.00	3
4	HOOVER	SALES_I	2	1990-04-01 00:00:00	27000.00	NULL	3
5	LINCOLN	TECH	6	1984-06-23 00:00:00	25500.00	1400.00	4
6	GARFIELD	MANAGER	9	1983-06-01 00:00:00	54000.00	NULL	4
7	POLK	TECH	6	1987-09-22 00:00:00	25000.00	NULL	4
8	GRANT	ENGINEER	10	1987-03-30 00:00:00	32000.00	NULL	2
9	JACKSON	CEO	NULL	1980-01-01 00:00:00	78000.00	NULL	4

newhire 3

Object Info Session Action Output

Schema: QuickSightDatabase

Action Output

Time	Action	Response	Duration / Fetch Time
28	23:16:47	SELECT ... Error Code: 1146. Table 'QuickSightDatabase.newhire' doesn't exist	0.101 sec
29	23:17:07	CREATE ... 0 row(s) affected	0.072 sec
30	23:18:47	SELECT ... 0 row(s) returned	0.057 sec / 0.088 sec
31	23:18:48	SELECT ... 0 row(s) returned	0.051 sec / 0.00004...
32	23:18:47	INSERT ... 14 row(s) affected Records: 14 Duplicates: 0 Warnings: 0	0.053 sec
33	23:19:34	SELECT ... 14 row(s) returned	0.054 sec / 0.00022...

Query Completed

# Introducing Today's Project!

## What is Amazon RDS?

It allowed me to see how DB's work and how we can create analytics to the datasets we create.

## How I used Amazon RDS in this project

I used to create security groups and also to add datasets then connect them to our Quicksight to it.

## One thing I didn't expect in this project was...

I did not expect to see how many security measures we must take to keep all our resources and data secured.

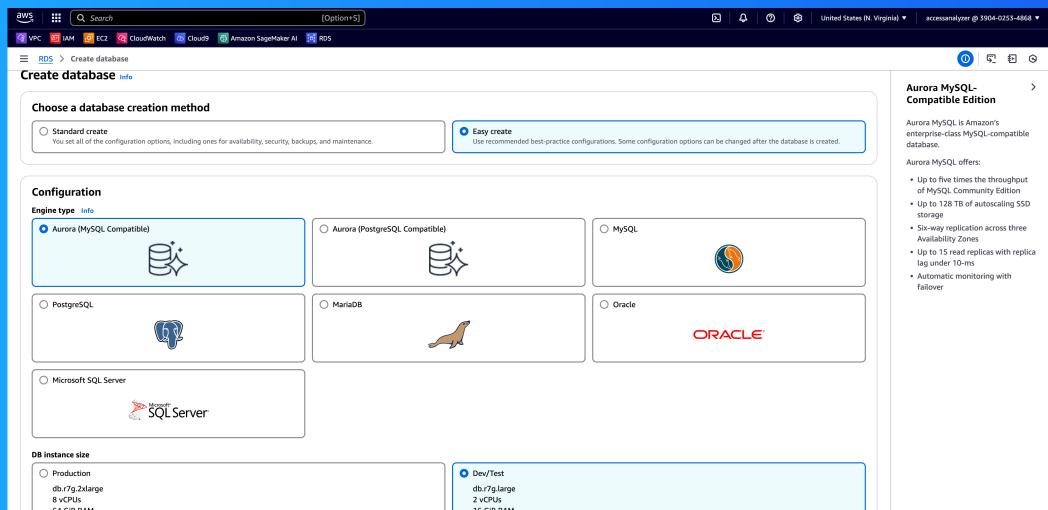
## This project took me...

I spent about 1.3 hrs doing this project.

# In the first part of my project...

## Creating a Relational Database

I created a relational database by going to RDS in AWS and following the Easy Create steps. I set the name and login details of my database.



# Understanding Relational Databases

A relational database is a type of database where the data is structured in a way that relates to itself.

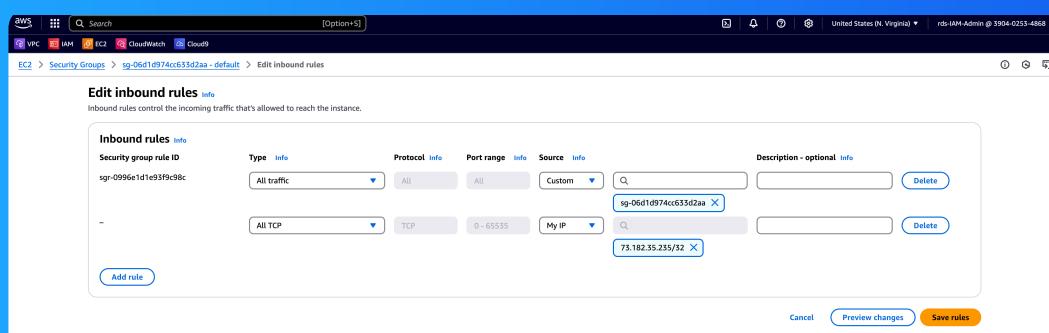
## MySQL vs SQL

The difference between MySQL and SQL is SQL is a query language for extracting data from a database. MySQL is a framework for setting up a relational database. It's widely considered the classic.

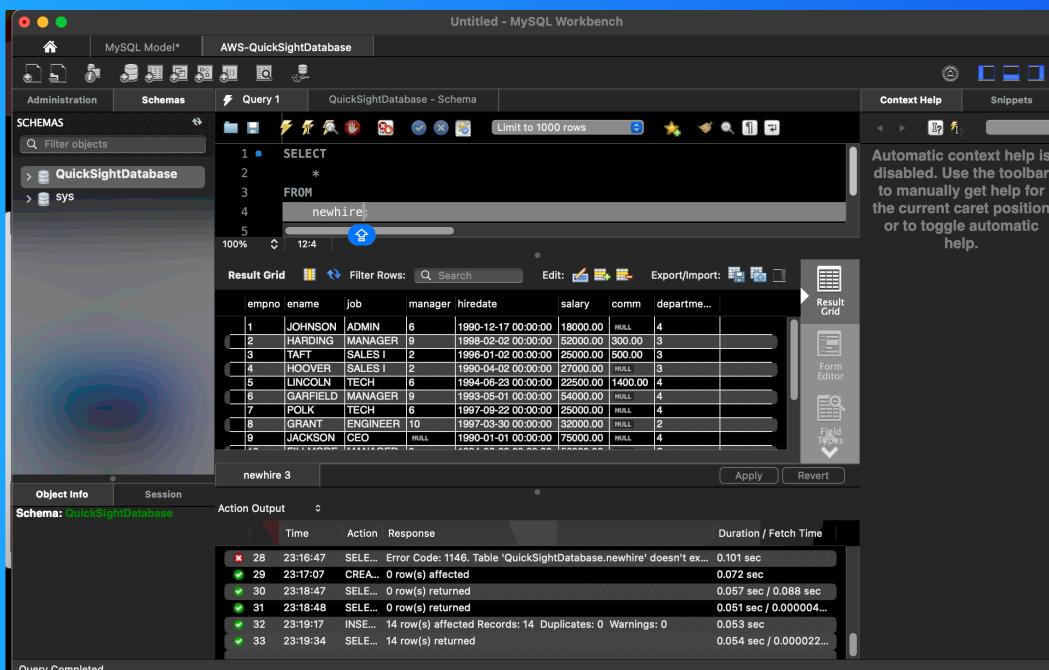
# Populating my RDS instance

I made my RDS instance public to allow a connection from MySQL Workbench.

We updated our security group to allow MySQL Workbench access to my local computer. So now we can access our database with our local computer.



# Using MySQL Workbench



To populate my database I add table data and beautified it while clicking the lightning button. I then deleted the data and inputted `SELECT \* FROM department;` to showcase the schema with all its objects.

# Connecting QuickSight and RDS

To connect my RDS instance to QuickSight made my security group around my RDS instance allow traffic from any IP address so that Quicksight can connect easily.

This solution is risky because we are allowing anyone to come into our RDS instance and steal, damage or corrupt our data set. Keep our group with 0.0.0.0.0 keeps us unprotected.

## A better strategy

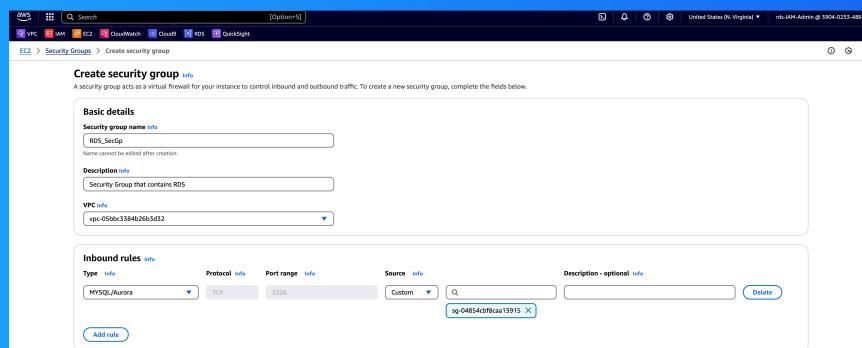
First, I made a new security group so that we are able to connect our RDS instance to our Quicksight with no room for hackers or unauthorized personal to connect to our RDS instance.

Next, I connected my new security group to QuickSight by creating a connection to Quicksight and my VPC and then my security group. I had to update my role that was used to do this.

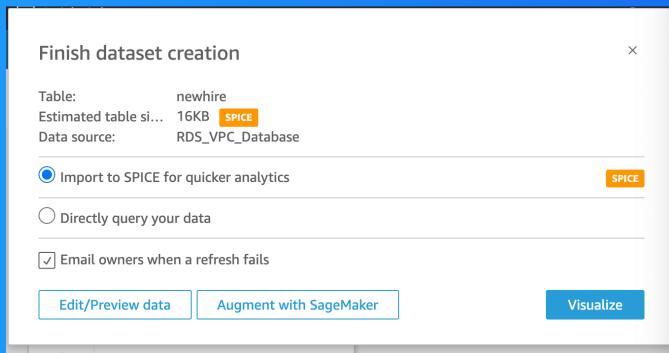
# Now to secure my RDS instance

I had to block all public access in my RDS then create a security group for my RDS instance so my Quicksight can connect.

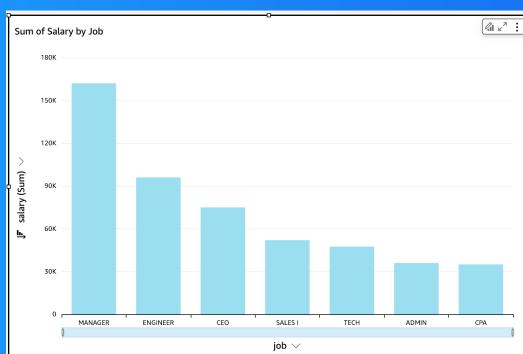
I made sure that my RDS instance could be accessed from QuickSight by creating the correct inbound rules that allowed my querying of my RDS instance from my Quicksight security group.



# Adding RDS as a data source for QuickSight



This data source is different from my initial data source because it is secure. We're using security groups to access our data. No more default security groups.





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