

### **Cloud Solutions, BigQuery**

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#### **Services**

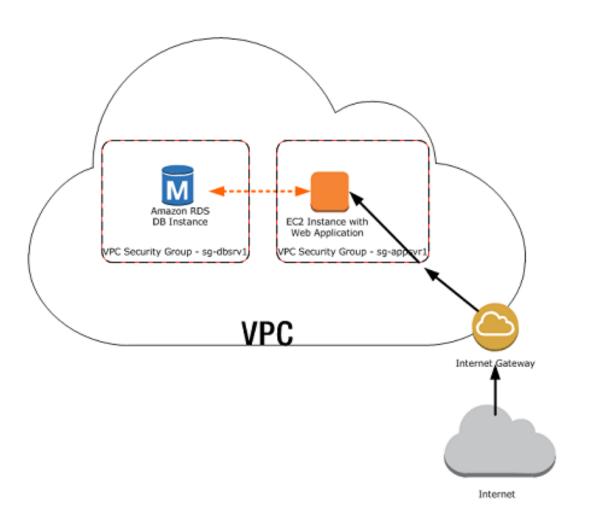


Database Type	AWS	GCP	Azure
Managed RDS	Amazon RDS	Cloud SQL	Azure SQL
Data Warehousing	Redshift	Bigquery	Snowflake
NoSQL (simple key-value)	DynamoDB	BigTable	Azure Tables
NoSQL (document)	MongoDB on EC2	MongoDB on GCE	DocumentDB

#### **Connect to cloud RDS**



- Setting up
  - EC2 machine for computation (installing computing environment, such as Jupyter)
  - Database like Amazon RDS
    - Placed in the same virtual private network
    - Allowing the access from the computation machine



# Google Cloud Platform: Bigquery



- What is it: GCP's data warehousing
- Fully managed service
- Scalable: SQL-like syntax for datasets of any size
- Fast
- Affordable pricing and cost control
- API access allows integration with python

# **BigQuery: Structure**

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- A dataset is like a database
  - Tables in a dataset
- Jobs: tasks to perform on the data
  - Queries
  - Loading/exporting data

# **Bigquery pricing**



Operation	Pricing	Details
Active logical storage	\$0.02 per GiB per month	The first 10 GiB is free each month.
Long-term logical storage	\$0.01 per GiB per month	The first 10 GiB is free each month.

Operation	Pricing	Details
Queries (on-demand)	\$6.25 per TiB	The first 1 <mark>TiB</mark> per month is free.

# **BigQuery Pricing**

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- You can use free-tier + 300 dollars credit
- How much you can do with that with 300 dollars?
  - 48 TB of queries
  - 4,800 queries for 10GB dataset