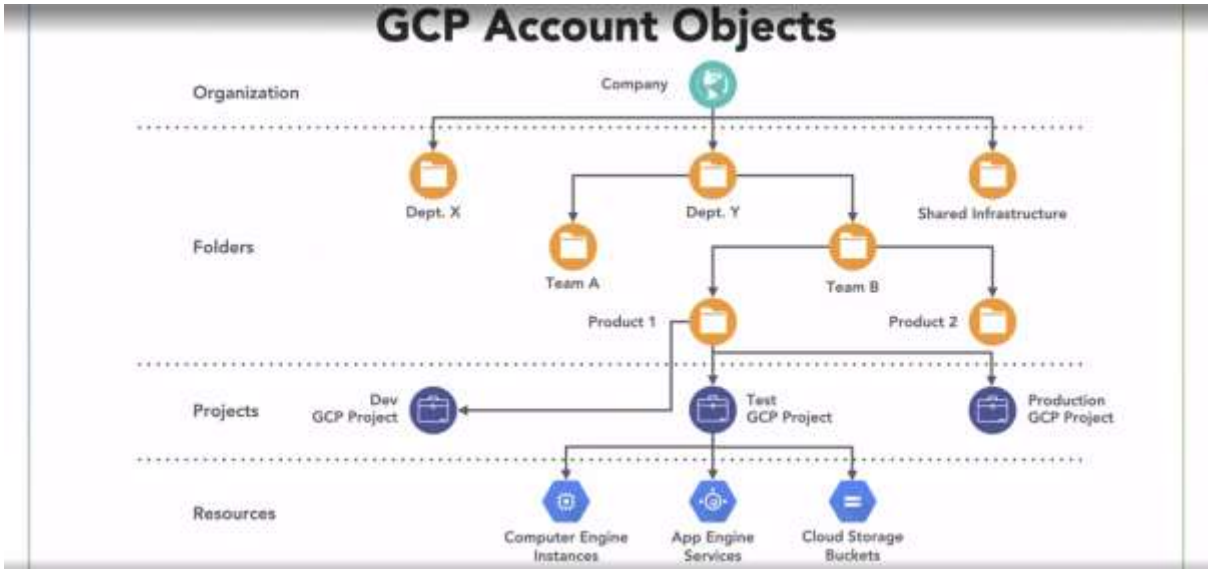
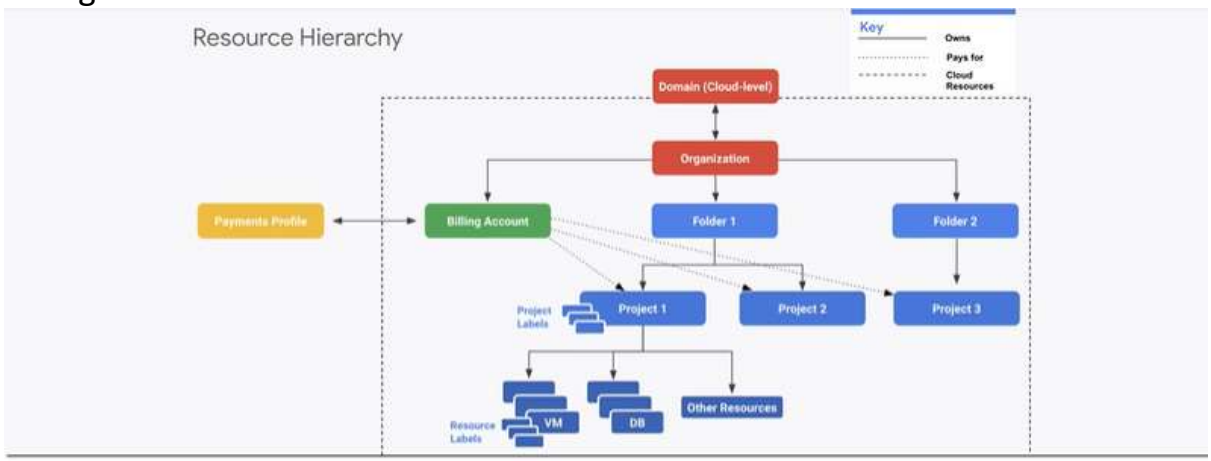
Google Cloud Essential for Administrators



Regions and Zones:

- While creating a VM instance we need to decide where our instance resources will reside.
- Depending upon the zone the cost of VM instance change.

Billing Information:



Example GCP Billing Account Setup

Reference: https://cloud.google.com/billing/docs/concepts

- Type billing in GCP search and go to billing.
- There you can select which resources you want to see.

IAM (Identity access management)

- View by principals: principals are email id. There are service account and user account in IAM.
- View By role: role is collection of permissions. There are Built in roles and custom roles.
- To provide access for this project click on grant access and provide details along with type of role you want to provide.

Console:

- Console helps in running various commands.

Google cloud Storage

Bucket:

- Buckets are for storage in GCP.
- You can upload any kind of files in the bucket however all of them cannot be viewed from the web UI.
- To edit a file
    - Open the console
    - Copy the file to the env through gsutil cp "path" .
        - Path is the gs path of the file in the bucket which can be retrieved by clicking on the file and copying the path.
        - Eg "gsutil cp gs://simple-storage-bucket1/FileZillaport.txt ."
    - Click on open editor
- GCS has 4 different storage classes.

Hosting RDBMS in GCP:

- Create a SQL cloud instance.
- Select DB from MySQL(free), PostgresSQL(free) and SQL Server(licensed).
- You can configure much more details there.

BigQuery:

- GCP allows to use data warehousing capabilities through big query.
- We can run the SQL commands and get much detailed information about our result through "query result" tab.
- We can also check the amount of information being processed by clicking on more option and then format query.

- To add data click Add Data > public datasets > market place will be opened were you can choose from available databases.

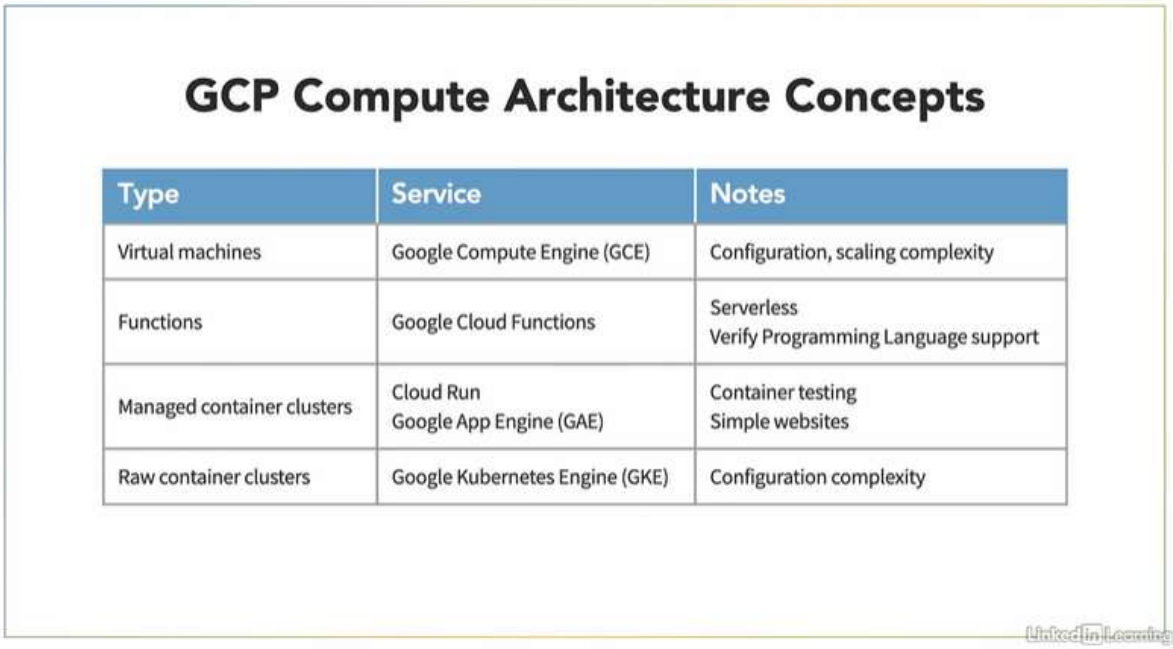
Google firestore:

- Used for semi-structured data.
- Google provide options such as Native mode and datastore mode.
- You can add your own collection enter the data into it.
- You can write query to retrieve data.
- Often used to store JSON type of data.

Google Pub/Sub:

- Message passing middleware.
- 2 version: Pub/Sub and Pub/Sub lite.
- We need to create a topic in this.
- Helps distributed system

Compute



VM:

- You can add new column to get more information.
- You can create a VM instance.
- This VM instance if linux can be started using SSH.
- They belong to a single region.
- You can use available images of make you own machine image to create a VM instance.

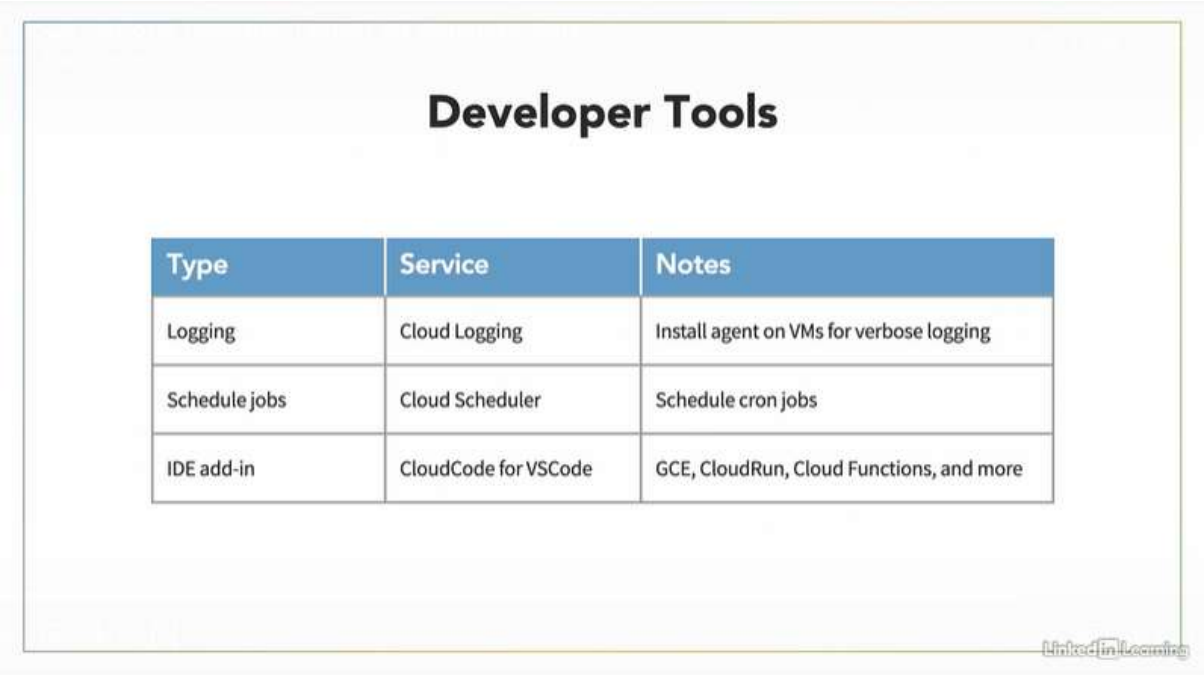
Google Cloud Function:

- Server less execution environment for building and connecting cloud services
- You can directly deploy the code that is present with you. No need to worry about scaling

Google cloud run:

- Bring your own container and google supplies infrastructure for scaling that container.

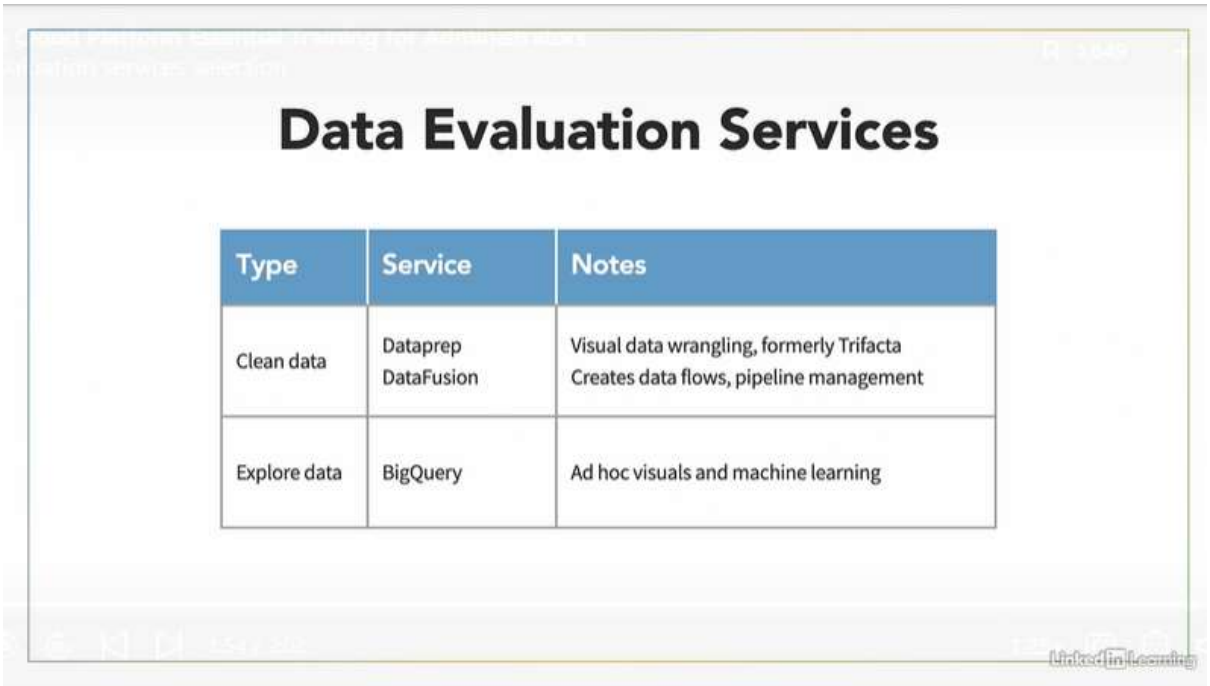
Developers tools



Cloud logging (Operations Logging)

- Central home for loggings

Data Evaluation



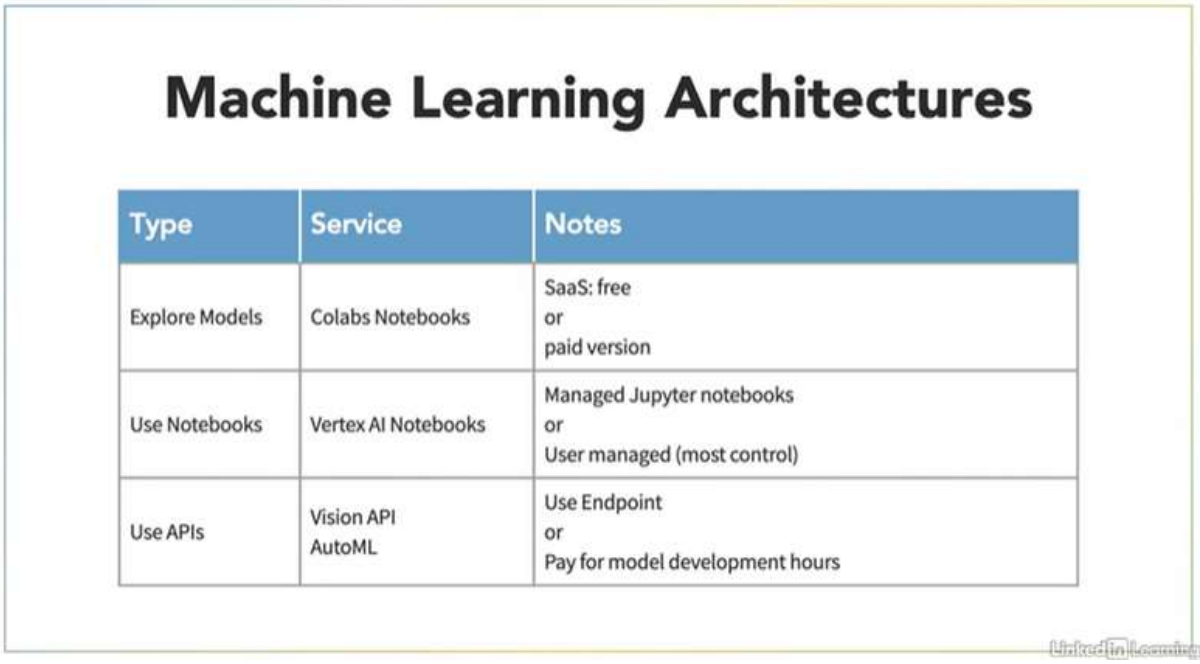
Google DataPrep:

- Intelligent data preparation web application offered by trifacta a privately owned company.
- For visualizing, cleaning, preparing structure and unstructured data for analysis, reporting and ML.
- Apache beam is used

Google cloud data fusion:

- Fully managed cloud native enterprise data integration service for quickly building and managing data pipelines.
- Apache spark is used.

Machine Learning



Google colab:

- Free and paid version
- Free version used for running existing ML models.