



Google Cloud Platform

GCP

Diego Pacheco

# About Me



- ❑ Cat's Father
- ❑ Principal Software Architect
- ❑ Agile Coach
- ❑ SOA/Microservices Expert
- ❑ DevOps Practitioner
- ❑ Speaker
- ❑ Author



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# Best Infrastructure and Security



# Google GCP by Numbers

## Infrastructure by the numbers

**30.9** Billion  
dollars in trailing  
three years

**20** Cloud Regions Announced

**125** POPs

**90** CDN locations

**72** Dedicated Interconnect locations

**100,000s** of miles of fiber optic cable

**13** Subsea Cable Investments

# Regions

## Google Cloud Platform Regions



# Same infra for Google

Google Cloud brings battle hardened tech from Google products



## Search

Search ranking  
Speech recognition



## Android

Keyboard & speech input



## Play

App recommendations  
Game developer experience



## Gmail

Smart Reply  
Spam classification



## Drive

Intelligence in Apps



## Chrome

Search by Image



## Photos

Photos search



## YouTube

Video recommendations  
Better thumbnails



## Maps

Street View image  
Parsing Local Search



## Translate

text, graphic, and  
speech translations



## Cardboard

Smart stitching



## Ads

Richer Text Ads  
Automated Bidding



# Some Services



# PaaS

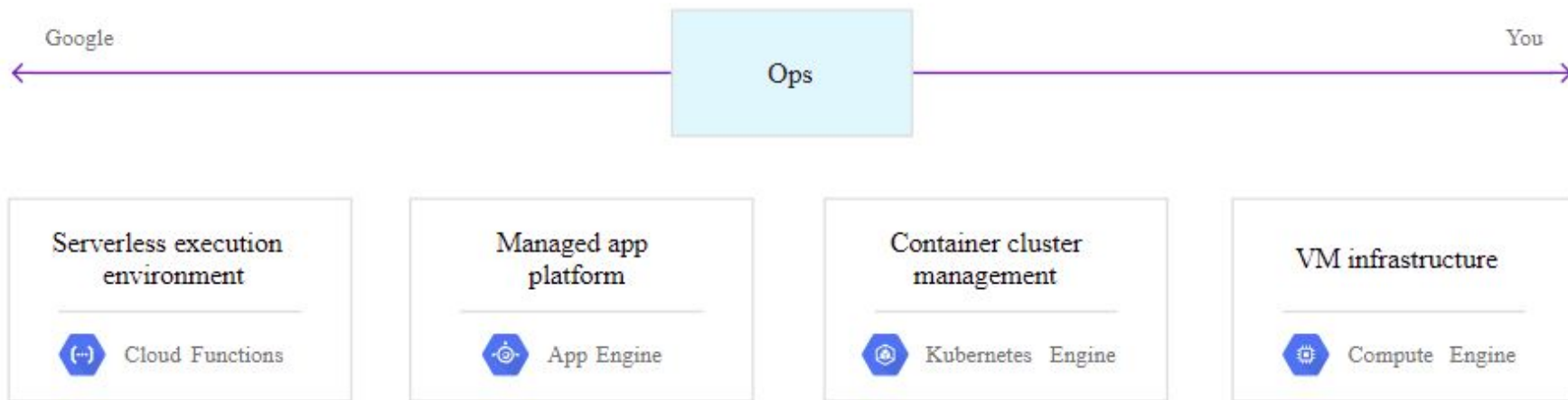
## APP ENGINE

### Comparing environments

Feature	Standard	Flexible
Instance startup time	Milliseconds	Minutes
Maximum request timeout	60 seconds	60 minutes
Background threads	Yes, with restrictions	Yes
Background processes	No	Yes
SSH debugging	No	Yes
Scaling	Manual, Basic, Automatic	Manual, Automatic
Writing to local disk	No	Yes, ephemeral (disk initialized on each VM startup)
Customizable serving stack	No	Yes (built by customizing a Dockerfile)
Automatic in-place security patches	Yes	Yes
Network access	Only via App Engine services (includes outbound sockets)	Yes
Supports installing third-party binaries	No	Yes



# Who Owns Ops?



# VMs

## Virtual Machines

### Compute Engine

- 1 - 96 processors
- .6 - 624 GB
- Disk limits
  - 65 TB Persistent
  - 3 TB SSD
  - 208 RAM
- Preconfigured images
  - Can build your own

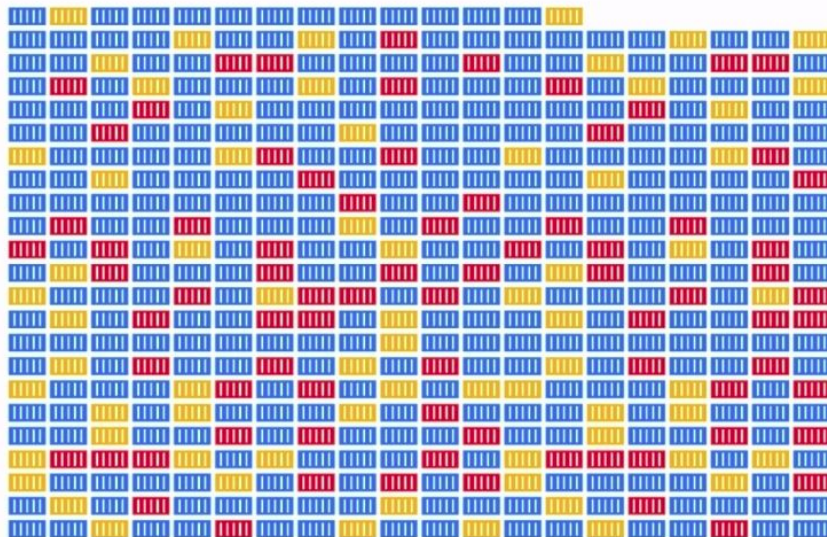


# All About Containers

Everything at Google  
runs in containers:

Gmail, Web Search, Maps, ...  
MapReduce, batch, ...  
GFS, Colossus, ...  
Even GCE itself: VMs in containers

We launch over  
**4 billion containers**  
per week.

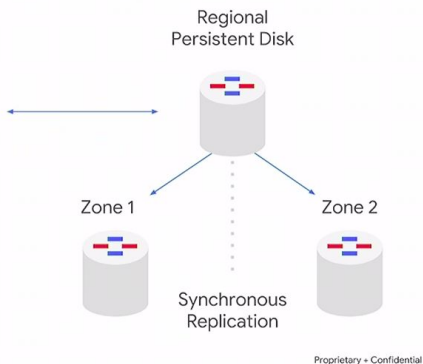


# PD == EBS

## Regional Persistent Disk<sup>BETA</sup>

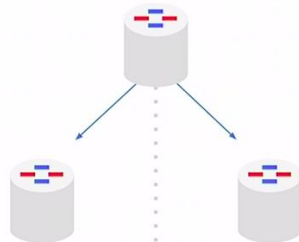


or



NEXTIO

## Regional Persistent Disk<sup>Beta</sup>



DR and HA building block

Improved availability and durability

Built for mission-critical applications

Backs Cloud SQL High Availability

Available Now!

# Instance Groups == ASGs

## Managed Instance Groups

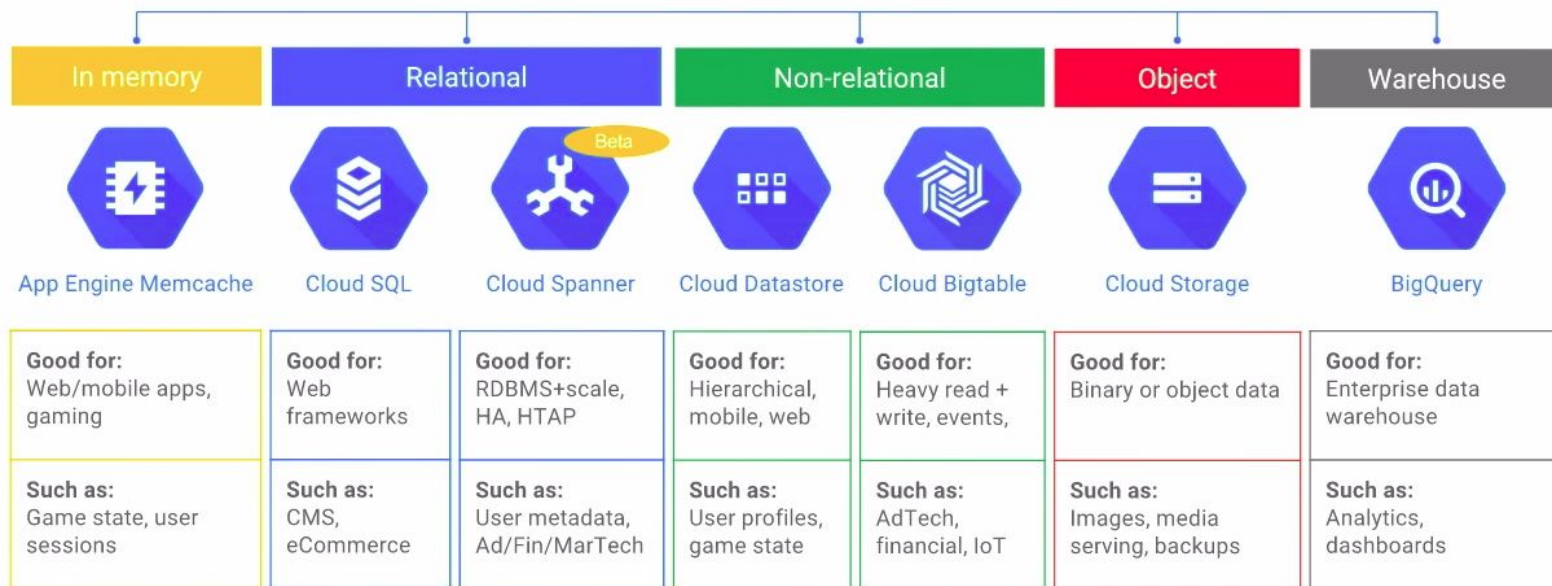
- ✓ Use Identical instance resources
- ✓ Used for Auto-Scaling
- ✓ Rolling updates can be done
- ✓ Changes to instance will make change in all the instances
- ✓ Load balancing for only similar resources.

## Un-Managed Instance Groups

- ✓ Use non- identical instance resources.
- ✓ Can not be used for Auto-Scaling
- ✓ Rolling updates cant be used
- ✓ Can make arbitrary changes in any instance
- ✓ Can be used for load balancing pre-existing resources or Groups of dissimilar resources.

# Database Spectrum

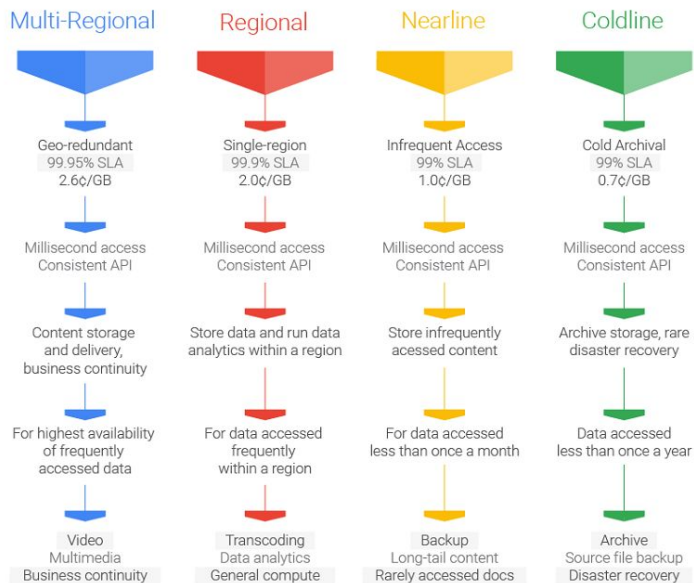
## Google Cloud database portfolio



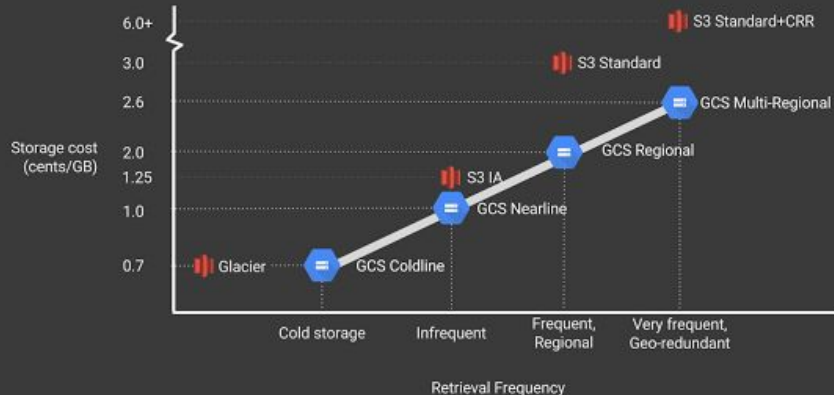


# Cloud Storage == S3

## Google Cloud Storage Classes

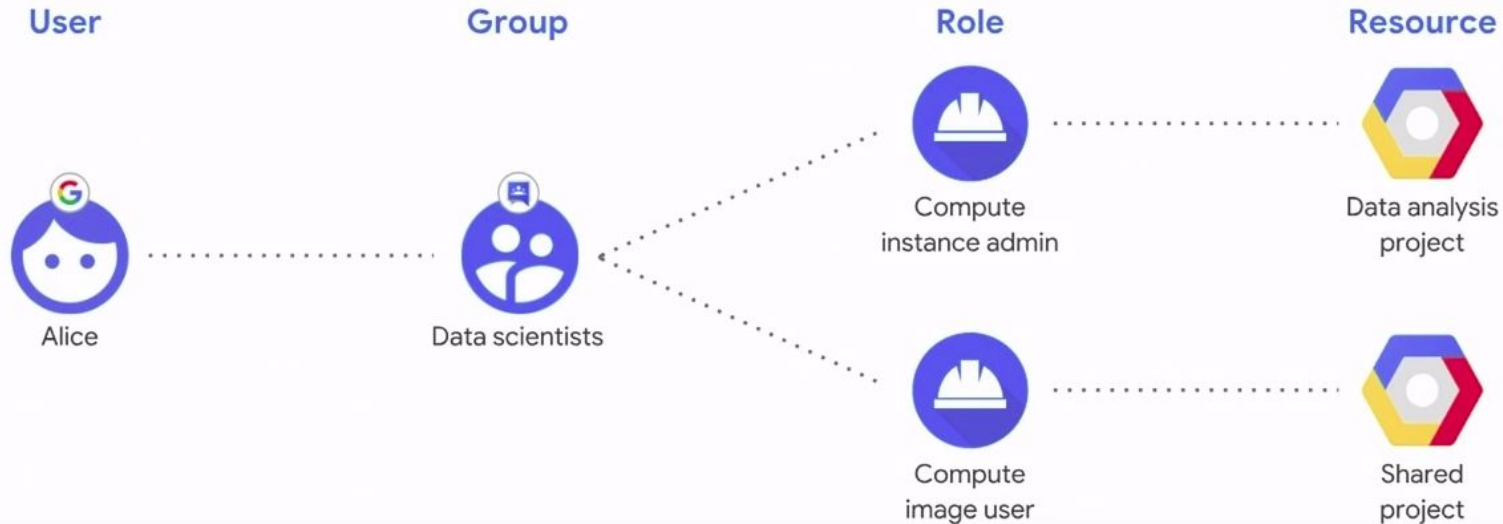


## Better value for hot or cold storage



# AIM - Better than AWS

Best practice: grant roles to groups, not users



# Bots and Audio Interfaces



Dialogflow



Google Cloud Platform



saldo  
financiamento  
preço 9403530





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