

DevOps Bootcamp



BOOTCAMP

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```



HELLO!

I am Alex Garcia
DevOps Engineer.

You can find me at
@alex_afro and I love
DevOps

1. Google Cloud

Let's start 😊

“

I don't need a hard disk in my computer if I can get to the server faster... carrying around these non-connected computers is byzantine by comparison.

- Steve Jobs

”

What is Cloud Computing?



Whats is cloud computing?

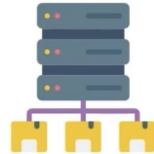


What is Cloud Computing?

- ▶ Cloud computing is the use of hardware and software components to deliver a service to a network. Users can access these files and applications from any device that can access the internet



Automatic Software Integration



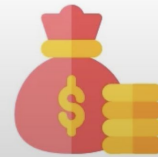
Backup and restore data



Unlimited Storage Capacity



Reliable



Cost efficient

What is GCP?

Google Cloud Platform is a suite of public cloud computing services offered by Google. The platform includes a range of hosted services for compute, storage and application development that run on Google hardware.

Google Cloud Platform services can be accessed by software developers, cloud administrators and other enterprise IT professionals over the public internet or through a dedicated network connection.



Why Google Cloud Platform?

- ▶ Pricing: It offers a monthly price plan which is billed according to the monthly usage.
- ▶ Speed:
 - ▷ Provides speed up to 10Tbs because of its faster cable system.
 - ▷ Google provides a low-latency network infrastructure.
- ▶ Big Data: Google has many innovative tools like BigQuery and real-time data processing Google Cloud Dataflow



Google Cloud

Google Cloud (also known as Google Cloud Platform or GCP) is a provider of computing resources for developing, deploying, and operating applications on the Web.

The core cloud computing products in Google Cloud Platform include:

Google Compute Engine, which is an infrastructure-as-a-service (IaaS) offering that provides users with virtual machine instances for workload hosting.

Google App Engine, which is a platform-as-a-service (PaaS) offering that gives software developers access to Google's scalable hosting.

Google Cloud Storage, which is a cloud storage platform designed to store large, unstructured data sets.

Google Kubernetes Engine, which is a management and orchestration system for Docker containers that runs within Google's public cloud.



Google Cloud platform domains



Compute



Storage & Database



Networking



Big Data



Developer Tools



Identity & Security



Internet of Things



Cloud AI



Management Tools



Data Transfer

Google Cloud Compute

The compute service allows for compute and hosting the cloud. The various services under this are as follows:

- App Engine
- Compute Engine
- Kubernetes Engine
- Cloud Functions
- Cloud Run



Compute

Google Cloud Storage & DB

- ▶ The Storage and DB service allows the app to store some media files, backups, or other file-like objects. The various services under this are as follows:
 - Cloud Storage
 - Cloud SQL
 - Cloud Datastore



Storage & Database

Google Cloud Networking

- ▶ The networking service allows us to load-balance traffic across resources, create DNS records, and much more. The various services under this are as follows:
 - VPC
 - Cloud Load Balancing
 - Cloud Armor



Networking

Google Cloud Big Data

- ▶ The Big Data Service allows us to process and query Big Data in the Cloud. The various services under this are as follows:
 - BigQuery
 - Cloud
 - Cloud Dataproc



Big Data

Google Cloud Developer Tools

- ▶ The developer tools service includes the tools related to the development of an app. The various services under this are as follows:
 - Cloud SDK
 - Deployment manager
 - Cloud test lab



Developer Tools

GCP Regions

Regions allow you to locate your cloud resources close to your customers, both internal or external.

The closer your customers are to the region where your cloud resources are located, the faster and better their experience will be.

For example, if your customers are located in Germany, it makes sense to choose a European region for your cloud region, even if your office is in Tijuana.



Google cloud developer tools

**ATTEND
GOOGLE
CLOUD NEXT**

**READ
DOCUMENTATION**

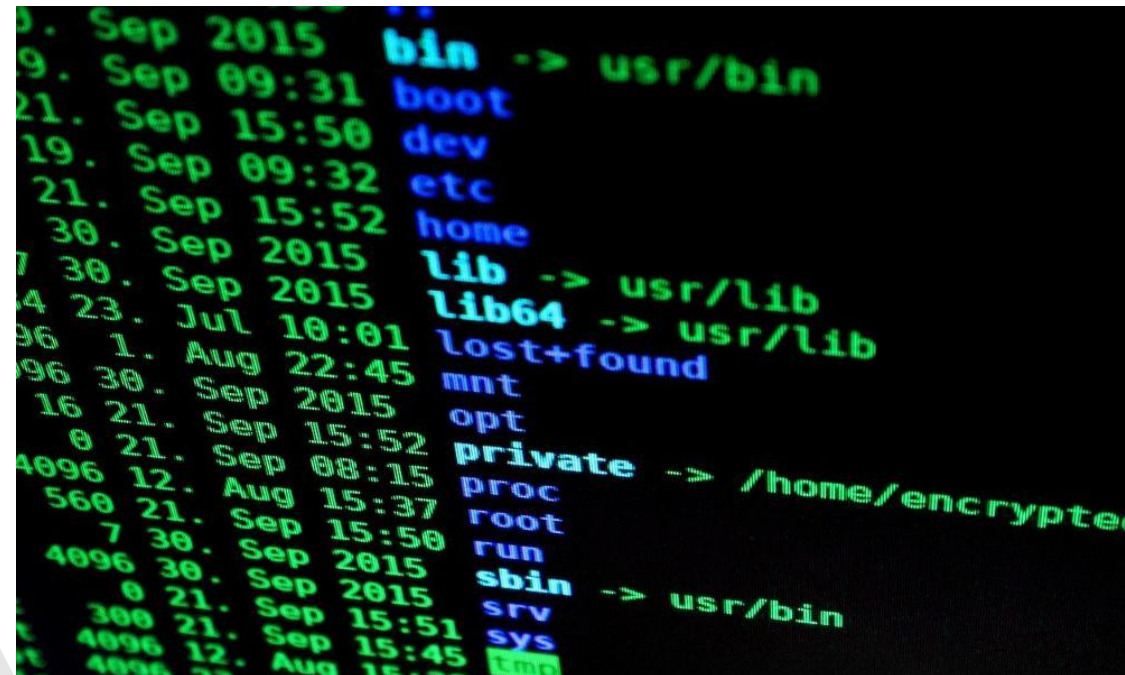
**GET GCP
CERTIFICATION**

**GET JOB IN GOOGLE
CLOUD TO FIGURE
OUT HOW IT
WORKS**



GCP commands

- ▶ Let's start with GCP

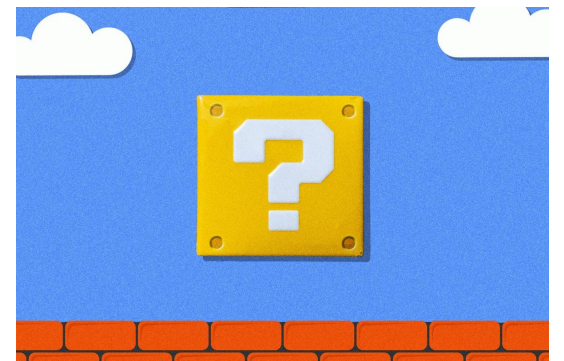


```
0. Sep 2015 bin -> usr/bin
9. Sep 09:31 boot
21. Sep 15:50 dev
19. Sep 09:32 etc
21. Sep 15:52 home
30. Sep 2015 lib -> usr/lib
7 30. Sep 2015 lib64 -> usr/lib
4 23. Jul 10:01 lost+found
96 1. Aug 22:45 mnt
96 30. Sep 2015 opt
16 21. Sep 15:52 private -> /home/encrypted
0 21. Sep 08:15 proc
4096 12. Aug 15:37 root
560 21. Sep 15:50 run
7 30. Sep 2015 sbin -> usr/bin
4096 30. Sep 2015 srv
0 21. Sep 15:51 sys
300 21. Sep 15:45 tmp
4096 12. Aug 15:37
```

GCP commands

Config your environment:

- Set default project, zone, region, etc
 `gcloud config set project [project-id]`
 `gcloud config set compute/zone us-central1-a`
- Where am I?
 `gcloud config list`



GCP commands

Interacting with services - go from big to small - nested groups (“command groups”)

gcloud | (service) | (sub-service*) | (action) | (action target) | - - flags

Example= gcloud compute instances create instance-1 -- zone=uscentral1-a

gcloud compute -- help

gcloud compute instances -- help

gcloud compute instances create -- help

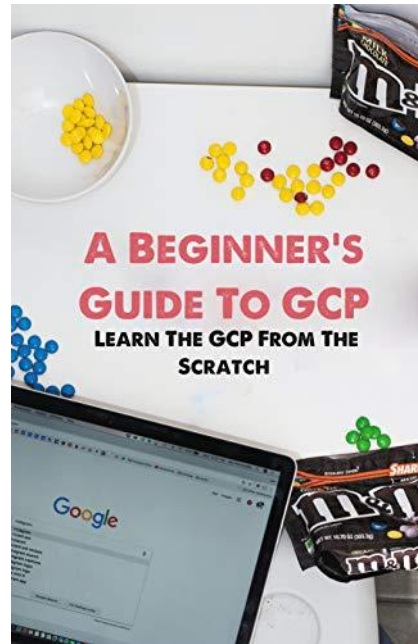
Install cloud SDK on your local machine: <https://cloud.google.com/sdk/docs/install>

Link to GCP references: <https://cloud.google.com/sdk/gcloud/reference>

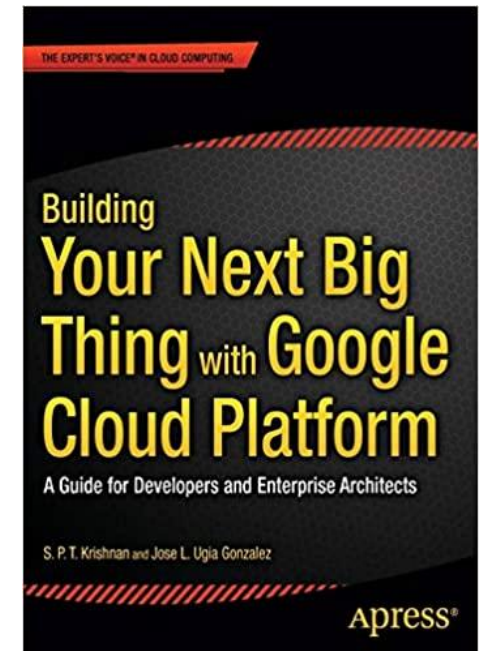
Comparison between cloud services

	Azure	AWS	GCP
Years on the market	2010	2004	2008
Market share	16.9%	32.3%	5.8%
Availability	60 geographic regions	24 geographic regions	24 geographic regions
Services	>200 services	>212 services	>90 services
Services computing	Azure Functions	AWS Lambda	Google Cloud Functions
Compute Services	Virtual Machine	Elastic Compute Cloud (EC2)	Compute Engine
Pricing	Changes per minute	Changes per hour	Changes per minute
Clients	Fujifilm, HP, Apple, Honeywell	Unilever, BMW, Netflix, Airbnb, Samsung	Vodafone, Toyota, LG, Spotify, Forbes

What should I read ?



For begin with GCP



For design solutions with GCP

THANKS!

Any questions?

You can find me at alex.garcia.dexcom@gmail.com