



High-level overview Google Cloud Platform



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Now you can ask “What is cloud computing?”



On-demand self-service

No human intervention needed to get resources



Broad network access

Access from anywhere



Resource pooling

Provider shares resources to customers



Rapid elasticity

Get more resources quickly as needed



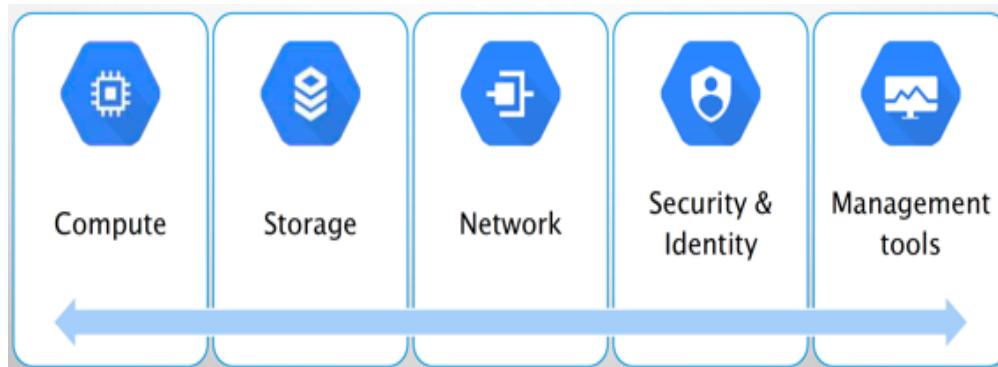
Measured service

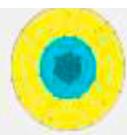
Pay only for what you consume

“Simply put, cloud computing is the delivery of computing services—servers, storage, databases, networking, software, analytics, intelligence and more—over the Internet (“the cloud”) to offer faster innovation, flexible resources, and economies of scale. You typically pay only for cloud services you use, helping lower your operating costs, run your infrastructure more efficiently, and scale as your business needs change”

Google cloud platform aka “GCP”

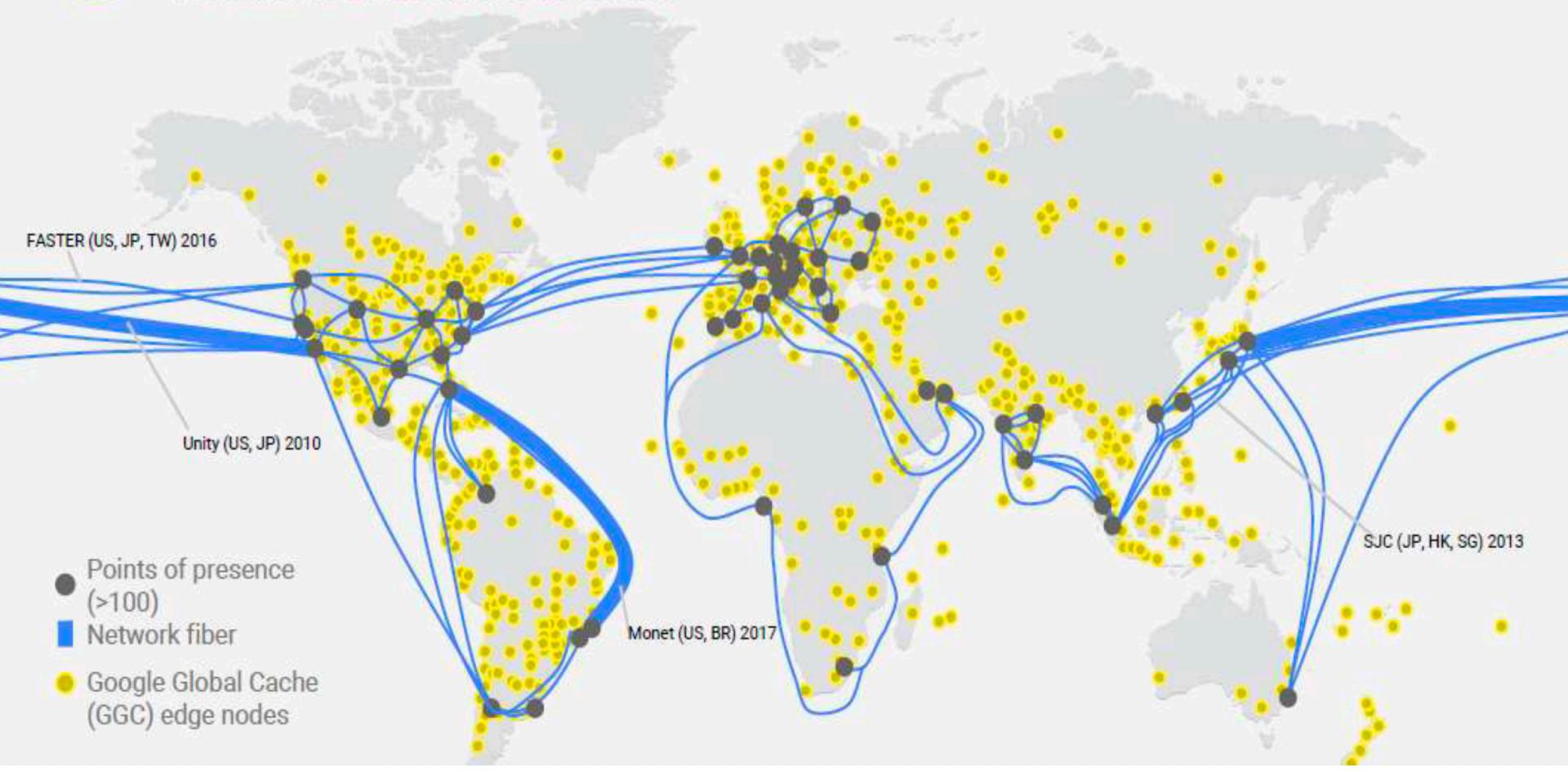
- ★ **Google Cloud Platform** enables developers to build, test and deploy applications on Google's highly-scalable and reliable infrastructure.
- ★ **Google Cloud Platform** is a set of modular cloud-based services that allow you to create anything from simple websites to complex applications.





Google Network

More than a collection of data centers



GCP compute and processing options

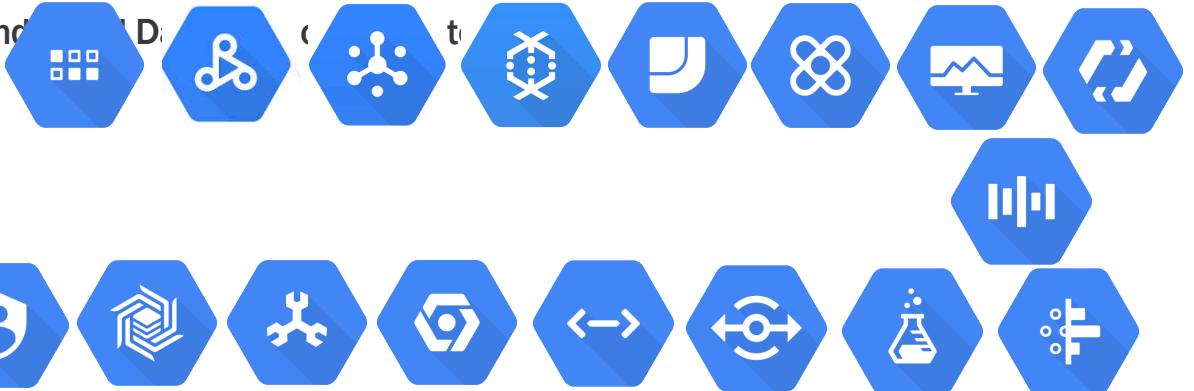
					
	Compute Engine	Kubernetes Engine	App Engine Standard	App Engine Flexible	Cloud Functions
Language support	Any	Any	Python Java PHP Go	Python Java Node.js Go Ruby PHP .NET Custom Runtimes	Node.js
Usage model	IaaS	IaaS PaaS	PaaS	PaaS	Microservices Architecture
Scaling	Server Autoscaling	Cluster		Autoscaling managed servers	Serverless
Primary use case	General Workloads	Container Workloads		Scalable web applications Mobile backend applications	Lightweight Event Actions

What is Google Cloud Platform?



GCP Is essentially a collection of managed Cloud Services

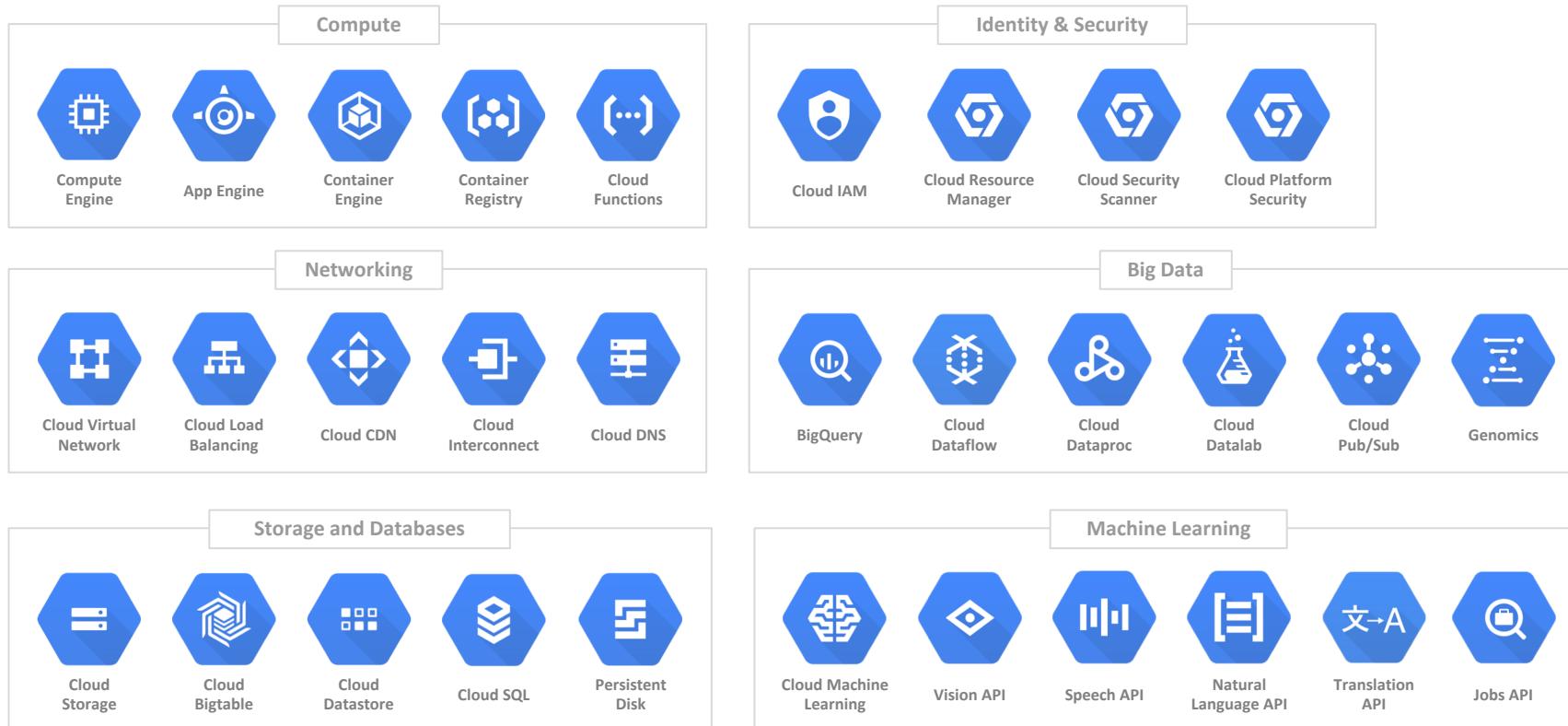
- Compute Engine, App Engine, Kubernetes Engine, and Cloud Functions for hosting
- Cloud Storage, Cloud SQL, BigQuery, and Cloud DataStore for storage
- Cloud DataProc, Cloud Pub/Sub, and Cloud DataFlow for processing
- To name a few...



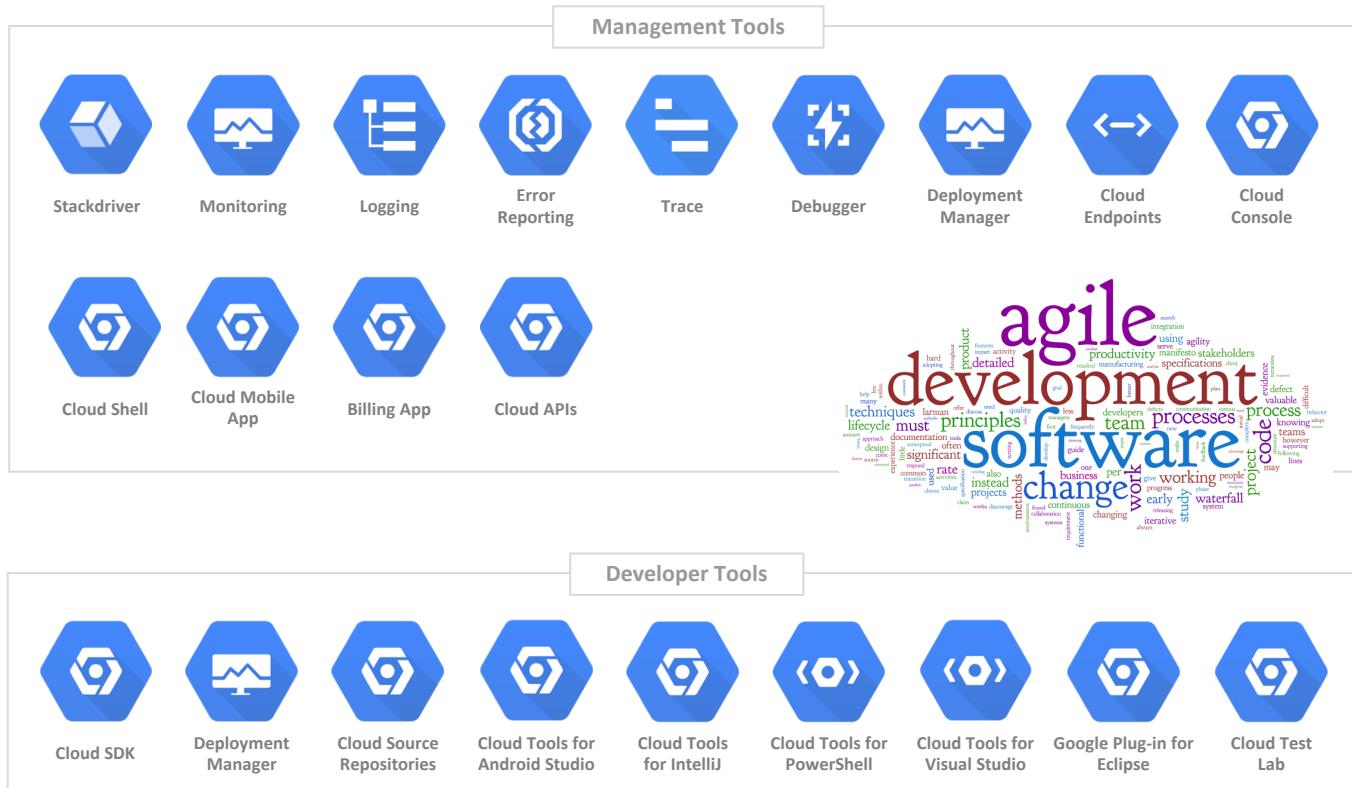
You can also use the following services:

- Currently in use by Agatha related teams where most of their infrastructure and hosting exists

Google Cloud Platform products and services



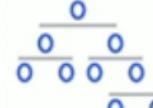
Google Cloud Platform Icons



#buzzwords

- ✓ Docker (Container Technology)
- ✓ GCS (Google Cloud Storage)
- ✓ GKE (Google Kubernetes Engine)
- ✓ Hybrid Cloud (Combination of Cloud Environments)
- ✓ Cloud Native (services in the cloud)
- ✓ Serverless (Simplify deployment)
- ✓ AutoML (Managed Machine Learning)
- ✓ CI/CD (Continuous Integration/Continuous Delivery)
- ✓ Kubernetes/K8s (Container Orchestration)
- ✓ Service Mesh (Connective tissue for microservices)

Data Storage Technologies

Purpose	RDBMS	Data Warehouse	Hadoop (data lake)	NoSQL (columnar)	NoSQL (documents)	Scalable RDBMS
What does it store?	Transactional Records	Structured data for analytics	Lots of (un)structured data	Key/value column family sparse data	Hierachal data	Transactional records at global scale
What does it look like?	 ETL → 	 Legacy Technologies	 			
GCP Offering	Cloud SQL	BigQuery	Cloud Storage & Cloud Dataproc	Cloud Bigtable	Cloud Firestore	Cloud Spanner
@ 84.51°?	Yes	Yes	Yes	Yes	Coming Soon	TBD

GCP Cloud Architect Exam Case Studies

Designing & Implementing GCP Migration

GCP DevOps Services

GCP APIs & Development Services

Cloud Dataflow for Data Processing

Containers

GCP Storage & Database Services

GCP Compute Services

GCP IAM and Security Services

GCP Networking Services

Managing GCP Services

Google Cloud Platform Introduction



Realtime Personalization Engine

Collect the data once – empower every team.

Lambda Architecture: Making use of both batch and stream-processing methods

