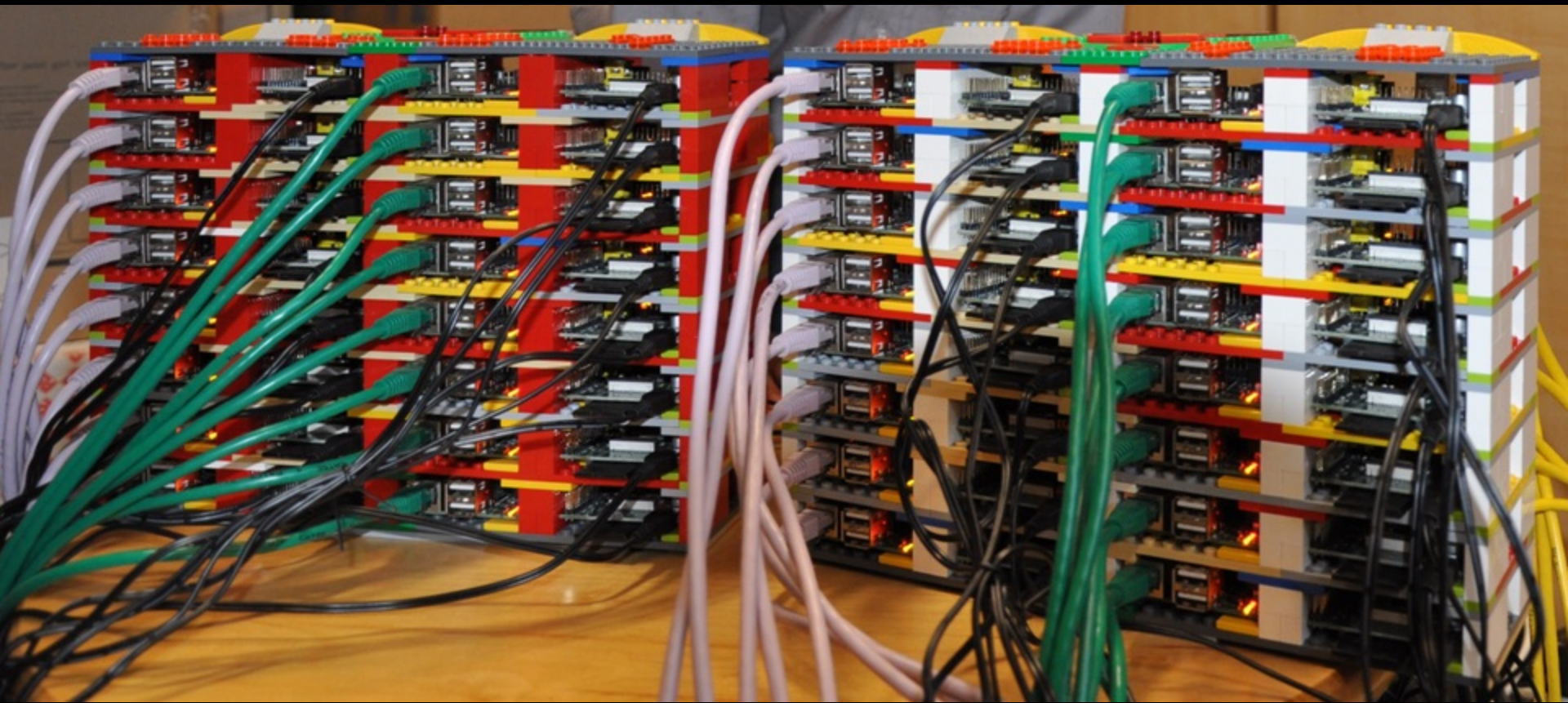




Google Cloud Platform

Dan Bye





Enter Google

Hosting + Compute



App Engine



Compute Engine

Storage



Cloud Storage



Cloud Datastore



Cloud SQL

Big Data



BigQuery

Services



Cloud Endpoints



Translate API



Prediction API

Google App Engine



Google App Engine

- Support for Python, Java, PHP, and Go

Google App Engine

- Support for Python, Java, PHP, and Go
- Download language specific SDK
 - Development can be done locally

Google App Engine

- Support for Python, Java, PHP, and Go
- Download language specific SDK
 - Development can be done locally
- Easily paired with the Compute Engine

Google App Engine

- Support for Python, Java, PHP, and Go
- Download language specific SDK
 - Development can be done locally
- Easily paired with the Compute Engine
- Node, C++, Scala, Hadoop, MongoDB, etc.

Google App Engine

- Support for Python, Java, PHP, and Go
- Download language specific SDK
 - Development can be done locally
- Easily paired with the Compute Engine
- Node, C++, Scala, Hadoop, MongoDB, etc.



Google App Engine

- Support for Python, Java, PHP, and Go
- Download language specific SDK
 - Development can be done locally
- Easily paired with the Compute Engine
- Node, C++, Scala, Hadoop, MongoDB, etc.



Google App Engine

- Database admin
- Server configuration
- Sharding
- Load Balancing
- Traffic Splitting
- Multitenancy support
- Multiple storage options
- Elasticity
- Eclipse
- IntelliJ
- Maven
- Git
- Jenkins
- PyCharm
- Etc.

Service	Free quota per app per day	Pricing if you exceed your free quota
Instances	28 instance hours	\$0.05 / instance / hour
Cloud Datastore (NoSQL Database)	50k read/write/small 1 GB storage	\$0.06 / 100k read or write ops Small operations free* \$0.18 / GB / month
Outgoing Network Traffic	1 GB	\$0.12 / GB
Incoming Network Traffic	1 GB	Free
Cloud Storage	5 GB	\$0.026 / GB / month
Memcache	Free Usage of Shared Pool No free quota for Dedicated Pool	Free Usage of Shared Pool Dedicated Pool: \$0.06 / GB / hour
Search	1000 basic operations 0.01 GB indexing documents 0.25 GB document storage 100 searches	\$0.50 / 10k searches \$2.00 / GB indexing documents \$0.18 / GB / month Storage
Email API	100 recipients	Contact Sales
Logs API	100 MB	\$0.12 per GB
Task Queue and Logs Storage	5 GB 1 GB	\$0.026 / GB / month
SSL Virtual IPs	No free quota	\$39 / virtual IP / month

Compute Engine



Compute Engine



- Virtual Machines

Compute Engine

- Virtual Machines
 - Standard
 - High CPU
 - High Memory
 - Micro-VMs to Large Instances



Compute Engine

- Load Balancing
- Instances use Google fiber
- Elasticity
- Data is transmitted and stored in encrypted form
- Software Packages: <https://cloud.google.com/compute/>
-

Cloud Storage



Cloud Storage

- Standard:
 - Durability
 - Availability
 - Performance

Cloud Storage

- Standard:
 - Durability
 - Availability
 - Performance
- Durable Reduced Availability
 - Durability
 - Performance
 - Cheaper than standard

Cloud Storage

- Standard:
 - Durability
 - Availability
 - Performance
- Nearline
 - Archiving
 - Online Backups
 - Disaster Recovery
- Durable Reduced Availability
 - Durability
 - Performance
 - Cheaper than standard

Cloud SQL



Cloud SQL

- MySQL Databases in the cloud

Cloud SQL

- MySQL Databases in the cloud
- Management
 - Replication
 - Patching

Cloud SQL

- MySQL Databases in the cloud
- Management
 - Replication
 - Patching
- Pay Per Use
 - Cost Effective

Cloud SQL

- MySQL Databases in the cloud
- Management
 - Replication
 - Patching
- Pay Per Use
 - Cost Effective
- Elastic

Cloud DataStore



Cloud DataStore

- NoSQL Databases

Cloud DataStore

- NoSQL Databases
- Managed
 - Sharding
 - Replication

Cloud DataStore

- NoSQL Databases
- Managed
 - Sharding
 - Replication
- Elastic

Cloud DataStore

	Free quota per day	Pricing if you exceed your free quota
Stored data	1 GB total limit	\$0.18 / GB / month
Read operations	50k	\$0.06/100k operations
Write operations	50k	\$0.06/100k operations
Small operations	50k	Free

Small datastore operations include calls to allocate datastore ids or keys-only queries. These operations are free.

BigQuery

- Used to process Big Data
 - SQL-Like Queries
 - First TB of data processed/month is free
- Short Example: <https://cloud.google.com/bigquery/#demo>
-

Google Cloud Platform Users

- Snapchat
- CocaCola
- Best Buy
- Ubisoft
- Khan Academy
- Sony Music
- SMART
- Rovio
- Scalr
- Pulse
- And More

Hosting + Compute



App Engine



Compute Engine

Storage



Cloud Storage



Cloud Datastore



Cloud SQL

Big Data



BigQuery

Services



Cloud Endpoints



Translate API



Prediction API

Sources

- <https://cloud.google.com/>
- <https://www.google.com/about/careers/lifeatgoogle/a-rare-inside-look-at-google-data-centers.html>
- <http://www.engineering.com/ElectronicsDesign/ElectronicsDesignArticles/ArticleID/5357/A-Supercomputer-made-with-Raspberry-Pi-and-LEGO.aspx>
-