Cloud Comparision

ACME Inc.

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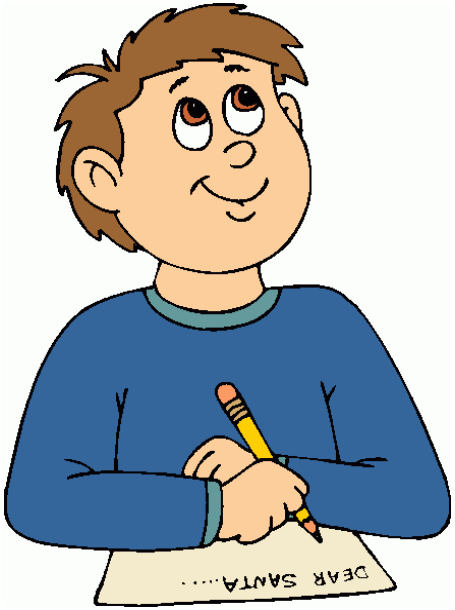
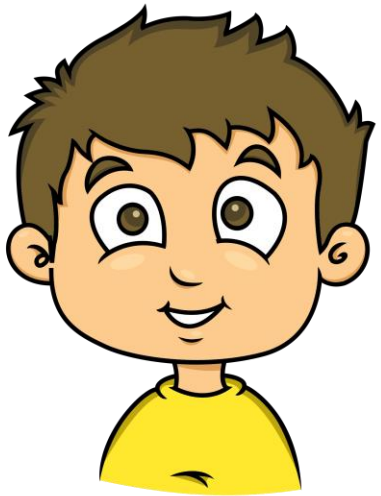
ACME INC. Team



John
AWS Expert



Bill
GCP Expert

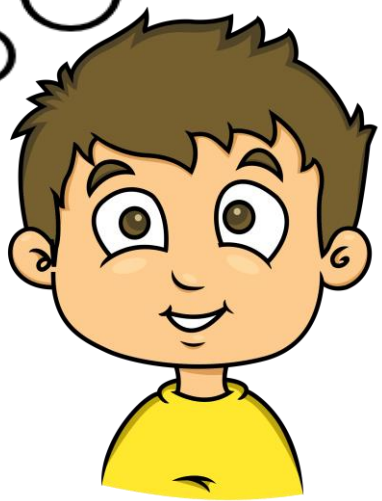
Problem

- Serverless Computing
- Dynamo DB
- RDS
- DNS

Discussion Board

- Storage
- Instances
- Load Balancing

- Reduce the real estate cost for our data center
- Reduce the upfront hardware and software costs
- Scale up customer demands
- Minimize Application's proximity to customers
- Improve the performance



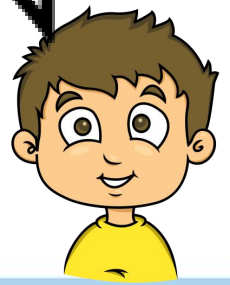
COMPUTE

AWS

- Largest AWS instance is 128 CPUs/2TB RAM
- Flexible instance configuration not allowed
- Manually migrate affected instances from host machines
- Manually enable SSH to instance
- Higher cost for instances
- SLA and Credits:
  99.0% - 99.95% - 10% credit
  Less than 99% - 30% credit

GCP

- Flexible instance configuration allowed
- Largest GCP instance is 96 CPUs/624 GB RAM
- Live migration - cloud platform automatically and transparently migrates instances
- Automatic SSH to instance enabled
- Lower cost for instances
- SLA and credits :
  99.00% – 99.95%,10% credit
  95.00% – 99.00%, 25% credit
  less than 95.00% - 50% credit



RDS

AWS

- Supports Aurora, PostGreSQL, MySQL, MariaDB, Oracle and Microsoft SQL Server
- Multi-AZ deployment available
- Storage :
  $0.125 per GB/month for SSD +$0.10 for provisioned IOPS,
  $0.10 for HDD, $0.10 per GB/month for backups.
- AWS RDS is based on the concept of synchronous replication.
- High-availability feature is not a scaling solution for read-only scenarios

GCP

- Supports only MySQL & PostGres
- High Availability deployment only available for MySQL engine
- Storage :
  $0.1819 per GB/month for SSD ,
  $0.0963 for HDD, $0.0856 per GB/month for backups.
- Based on the concept of semi-synchronous replication
- Can use the failover replica as a read replica

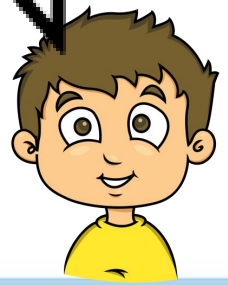
Unstructured Database

AWS

- Uses REST APIs, bit slower than gRPC. APIs available are get and put.
- Decentralized Architecture.
- Not possible
- Can be triggered using AWS Lambda
- On-Demand Backup and Restore costs $0.10 per GB-month and $0.15 per GB-month
- Availability locations are limited to launch the instances. Around 15 locations

GCP

- Uses GRPC for APIs and access methods. APIs available are get, put, scan and delete.
- Centralize Architecture
- Cell based Access control is achieved using column family
- No resource trigger functionality
- No charges for backup and restore
- Availability locations are limited to launch the instances. Only 6 locations



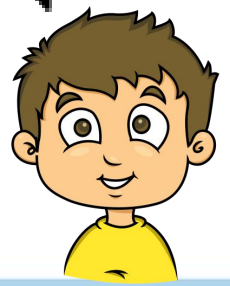
Server less Compute

AWS

- 1M free request/Month
- Beyond 1M, 0.20$/Million
- Available in most of the region
- supports range of runtime environments Java , NodeJs, Python etc
- Can be triggered by various AWS services
- Unlimited functions
- Execution time: 5 min/ request

GCP

- 2M free requests/month
- Beyond 2M, 0.40$/million
- Available only in central region
- Only NodeJs runtime environment
- Triggered using Pub/Sub topic, Http
- Limited to 1000 function/ project
- Execution time: 9min/request



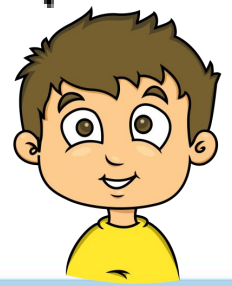
Storage

AWS

- 2.3 cent/GB/month. Multi region: 2.6 cents and free transfer of data
- Created in single region by default
- Available in16 Location, spread worldwide
- Higher latency
- Glacier $0.004(storage)

GCP

- Multi region is 2.6 cents with free transfer between buckets in same location
- Created in multi region by default
- Available only in 8 location, mostly in US
- Lower latency
- Cloud Storage Nearline: $0.01 (storage) + $0.01 (retrieval)



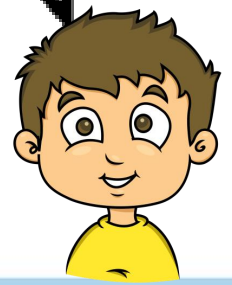
Load Balancer

AWS

- Cannot handle sudden spike in incoming traffic
- Pricing based on deployed load balancers per hour
- Additional charge for the amount of data processed

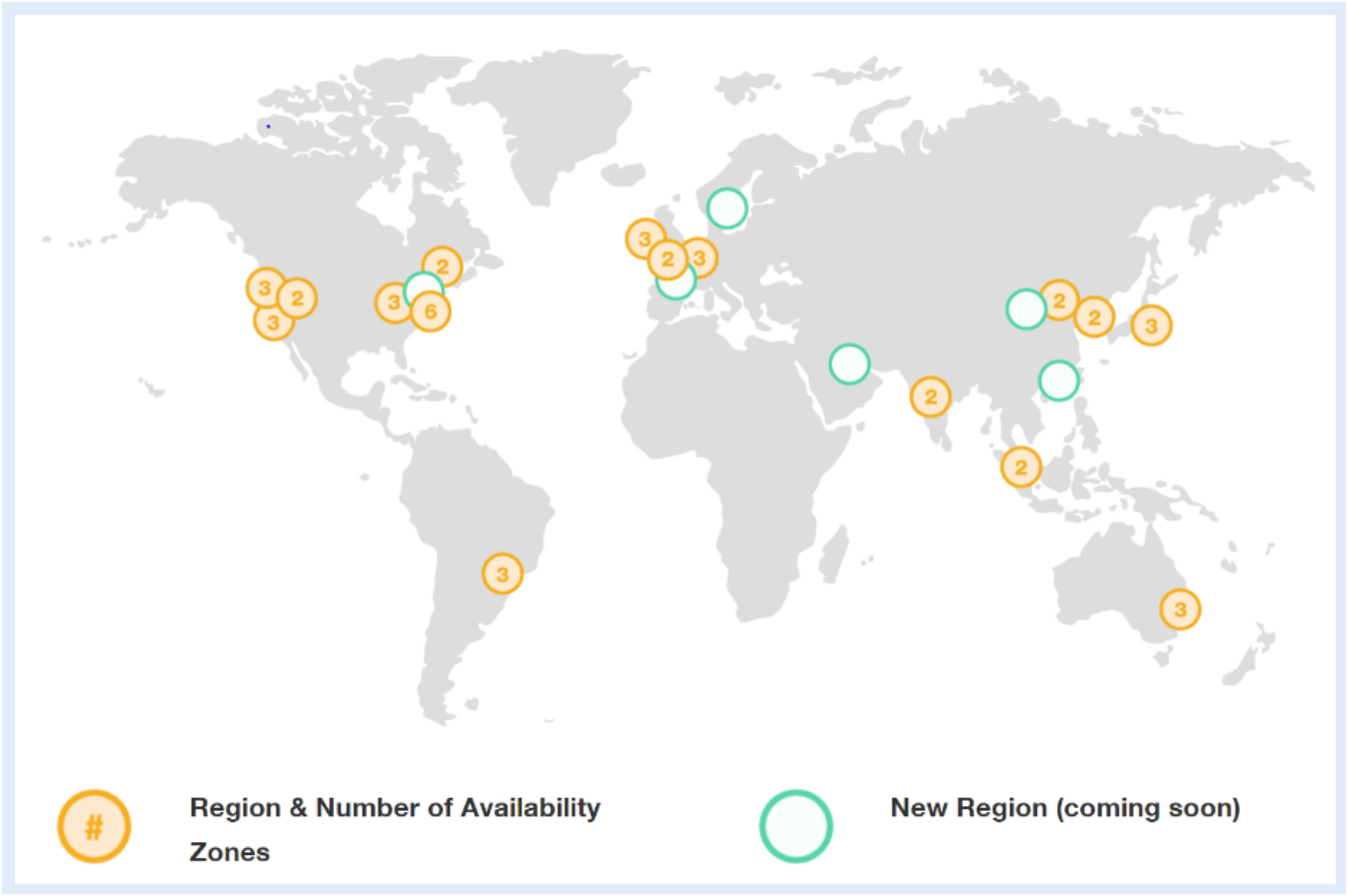
GCP

- Sudden spike in incoming traffic is automatically handled
- Pricing based on number of forwarding rules
- Additional charge for the amount of data processed



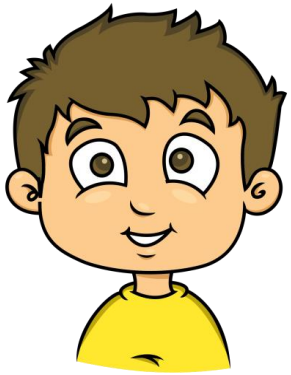
AWS global network

The AWS Cloud operates 44 availability zones within 16 geographical regions around the world

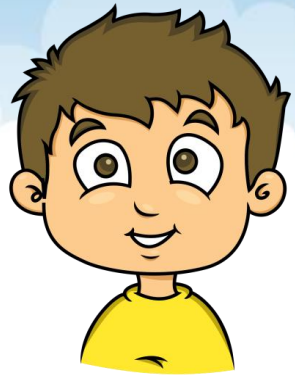


GCP Global network

GCP has 13 regions, 39 zones around the world



Pricing



AWS

Get Started with AWS: Learn more about our Free Tier or Sign U

free usage tier for first 12 months

Estimate of your Monthly Bill ($ 82.73)

Estimate of Your Monthly Bill

Show First Month's Bill (include all one-time fees, if any

your monthly bill. Expand each line item to see cost breakout of each service. To sav
np back to the service and clear the specific service's form.

GCP

Total Estimated Cost: $157.26 per 1 month

Adjust Estimate Timeframe

1 day | 1 week | 1 month | 1 quarter | 1 year | 3 years

EMAIL ESTIMATE

SAVE ESTIMATE

ACME INC. Final Discussion

Cloud Pricing

- GCP Is cheaper than AWS

Auto Scaling

- Linear vs Real time

Proximity

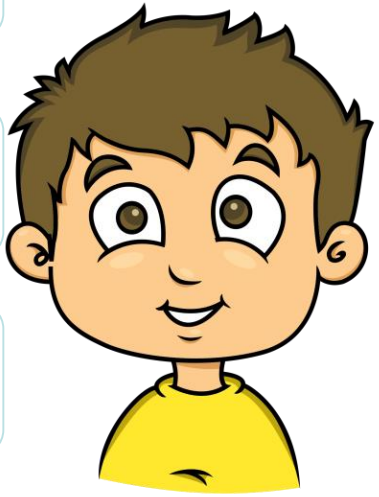
- Servers in 44 zones vs Servers in 39 zones

Performance

- GCP offers many tailor made options and is more performant

Trade Off

- Flexibility vs Simplicity



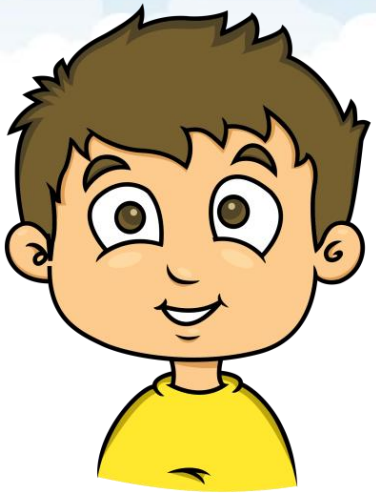
ACME INC. Recommendation

GCP

Pricing

Performance

Simplicity



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- GCP Documentation
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THANK YOU!!