AWS vs Azure vs GCP

LoadBalancing, AutoScaling, Serverless Computing Comparison

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What is Serverless Computing?

Serverless computing is a cloud computing execution model in which the cloud provider dynamically manages the allocation of machine resources.

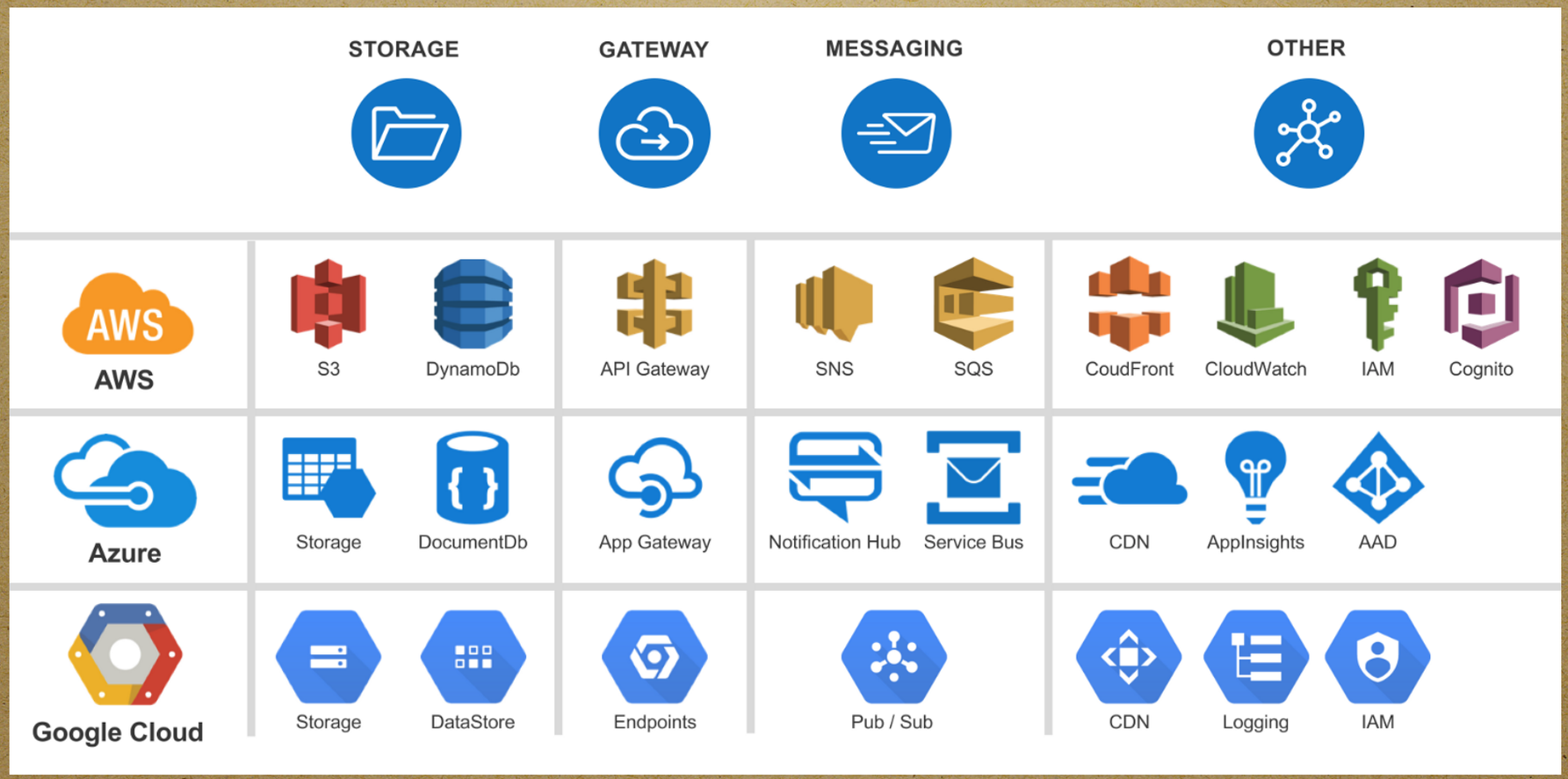
Serverless applications have three main benefits.

- No server management
- Flexible scaling
- Automated high availabilty

What is Autoscaling?

Autoscaling, also spelled auto scaling or auto-scaling, and sometimes also called automatic scaling, is a method used in cloud computing, whereby the amount of computational resources in a server farm, typically measured in terms of the number of active servers, scales automatically based on the load on the farm. It is closely related to, and builds upon, the idea of load balancing.

Services


STORAGE
GATEWAY
MESSAGING
OTHER
AWS
AWS
S3
DynamoDb
API Gateway
SNS
SQS
CoudFront
CloudWatch
IAM
Cognito
Azure
Storage
DocumentDb
App Gateway
Notification Hub
Service Bus
CDN
AppInsights
AAD
Google Cloud
Storage
DataStore
Endpoints
Pub / Sub
CDN
Logging
IAM

Functionality

Type	AWS	Azure	GCP
Max number of functions	Unlimited functions	Unlimited functions	1000 functions per project
Concurrent executions	1000 parallel executions per account, per region (soft limit)	No limit	No limit
Max execution	300 sec (5 min)	300 sec (5 min)	540 seconds (9 minutes)
Supported languages	JavaScript, Java, C#, and Python	C#, JavaScript, F#, Python, Batch, PHP, PowerShel	Only JavaScript
Deployments	Only ZIP upload (to Lambda or S3)	Services, OneDrive, Local Git repository, GitHub, Bitbucket, Dropbox, External repository	ZIP upload, Cloud Storage or Cloud Source Repositories
Granular IAM	IAM role	IAM role	Not yet

Cost

Type of Charges	AWS	Azure	GCP
Free Request	1M requests	1M requests	1M requests
Cost/Time Granularity	$0.20/1M invocations,plus $0.00001667/GB-sec	$0.40/1M invocations, plus $0.00000231/GB-sec	$0.20/1M invocations, plus $0.000016/GB-s

Serverless Computing

Services	AWS	Azure	GCP
Compute	AWS Lambda	Azure Function	
Email Service	Amazon Simple Email Services (SES)	None	None
Load Balancing	Elastic Load Balancing	Load Balancing for Azure (how to)	Cloud Load Balancing

Thank you!