

Welcome to AWS User Group Mumbai Meetup!

Diving Deep into AWS Lambda: The Future of Serverless Computing

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Agenda

- Cloud Computing
- Amazon Web Services
- Type of services
- Compute Offerings
- AWS Lambda
- Lambda Architecture
- Demo

Cloud Computing?

- There are various definition for it by various orgs and people
- In layman term: ***It's just someone else's computer***
- That someone are CSP (Cloud Service Providers)
- Eg: AWS, GCP, Azure, IBM & etc



Amazon Web Services (AWS)

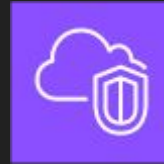
- Started offering cloud service from 2006.
- is a leading CSP and offers 200+ fully featured services
- Eg: EC2, S3, VPC, RDS and many more.



Compute



Storage



Networking



Database

Amazon Web Services (AWS)

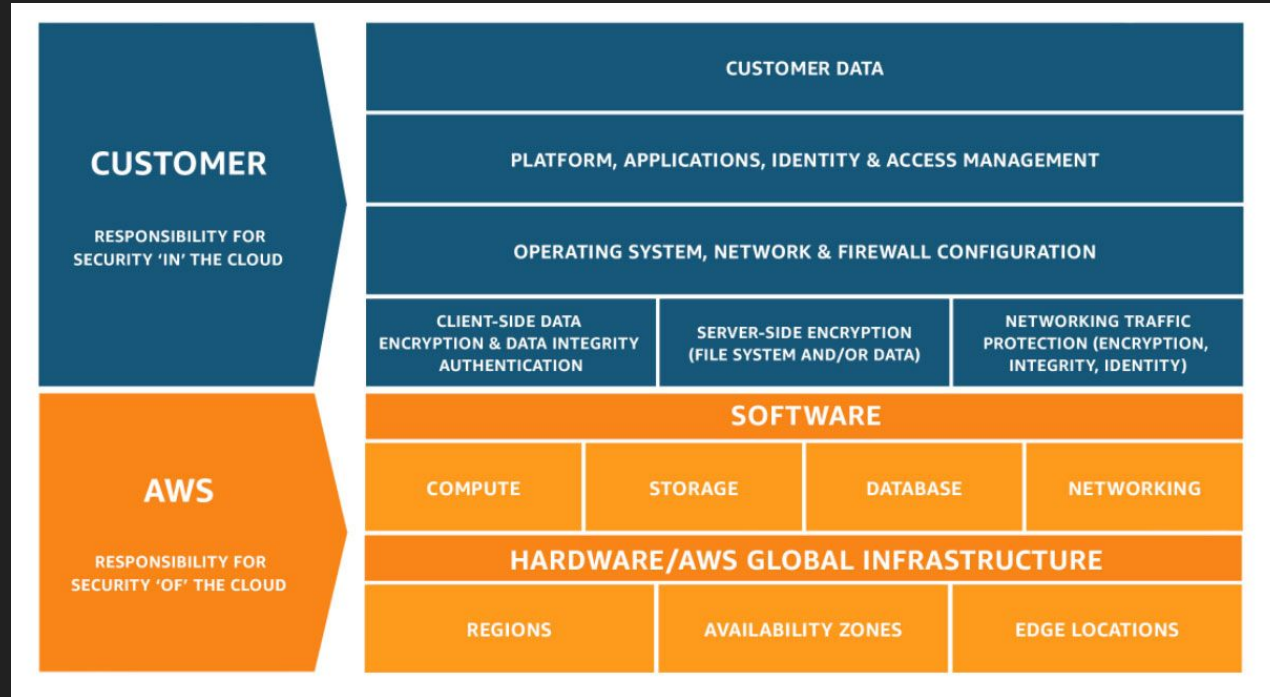
Features:

- Global Infrastructure
- Most Secure
- Always Innovating



Amazon Web Services (AWS)

Shared Responsibility Model:




Types of Services


Managed vs. Unmanaged Cloud Services

Feature	Managed Cloud Services	Unmanaged Cloud Services
Control	The hosting provider handles setup and customization	User handles setup and configuration
Backups	The provider manages regular backups and disaster recovery	User is responsible for backup operations
Cost-Effectiveness	Monthly subscription includes IT support and maintenance	Lower initial costs but requires IT team
Data Security	Advanced security measures and compliance support	User manages security, potentially less secure
End-User Support	24/7 technical support and regular updates	Limited to infrastructure support only

Types of Services

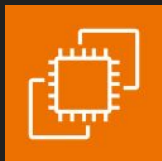
On-site	IaaS	PaaS	SaaS
Applications	Applications	Applications	Applications
Data	Data	Data	Data
Runtime	Runtime	Runtime	Runtime
Middleware	Middleware	Middleware	Middleware
O/S	O/S	O/S	O/S
Virtualization	Virtualization	Virtualization	Virtualization
Servers	Servers	Servers	Servers
Storage	Storage	Storage	Storage
Networking	Networking	Networking	Networking

 You manage

 Service provider manages

Compute Offerings

Instances (VM)



EC2



BeanStalk



Lightsail



Batch

Containers



ECS



ECR



EKS

Serverless



Lambda



Fargate

Edge and hybrid



Outpost



WaveLength

AWS Lambda

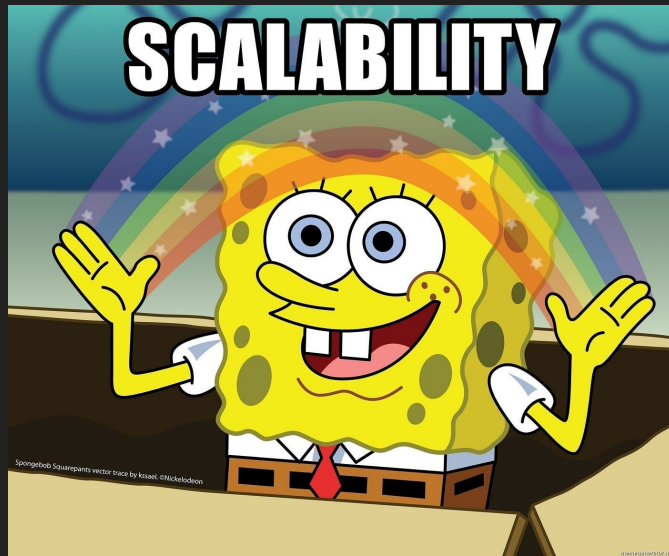
- Serverless compute service
- Run code without provisioning or managing servers
- Lambda runs the code in response to events or trigger
- Ephemeral nature
- Runtimes Offers: node.js, TypeScript, Python, Ruby, Java, Go, C#



Why Lambda?

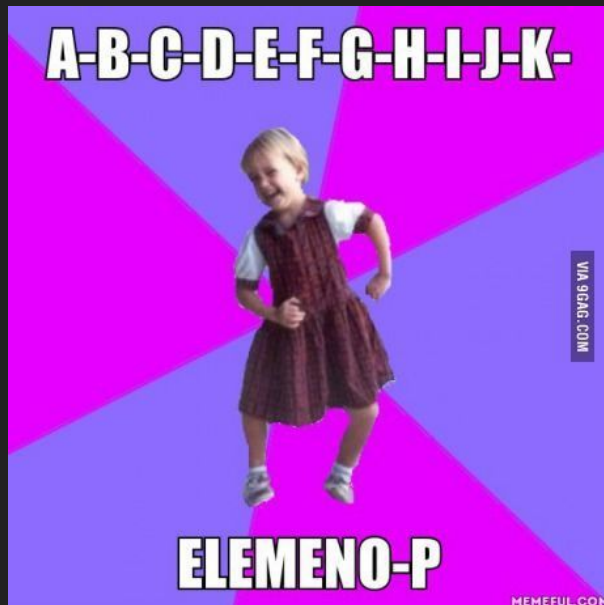
Benefits:

- No need for managing the servers
- Automatic Scaling
- Pay-as-you-go pricing
- Performance optimization
- Easy Integration with AWS Services



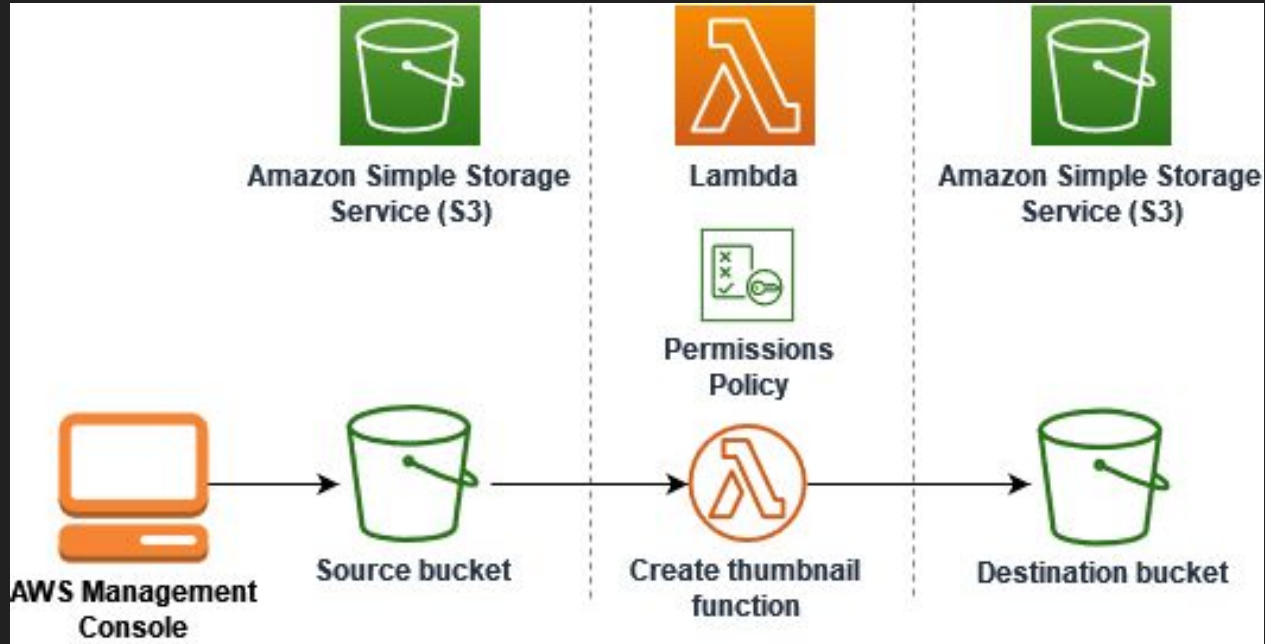
Some terms in lambda

- Function
- Trigger
- Event
- Deployment Package
 - .zip
 - container images
- Runtime
- Concurrency
- Destination



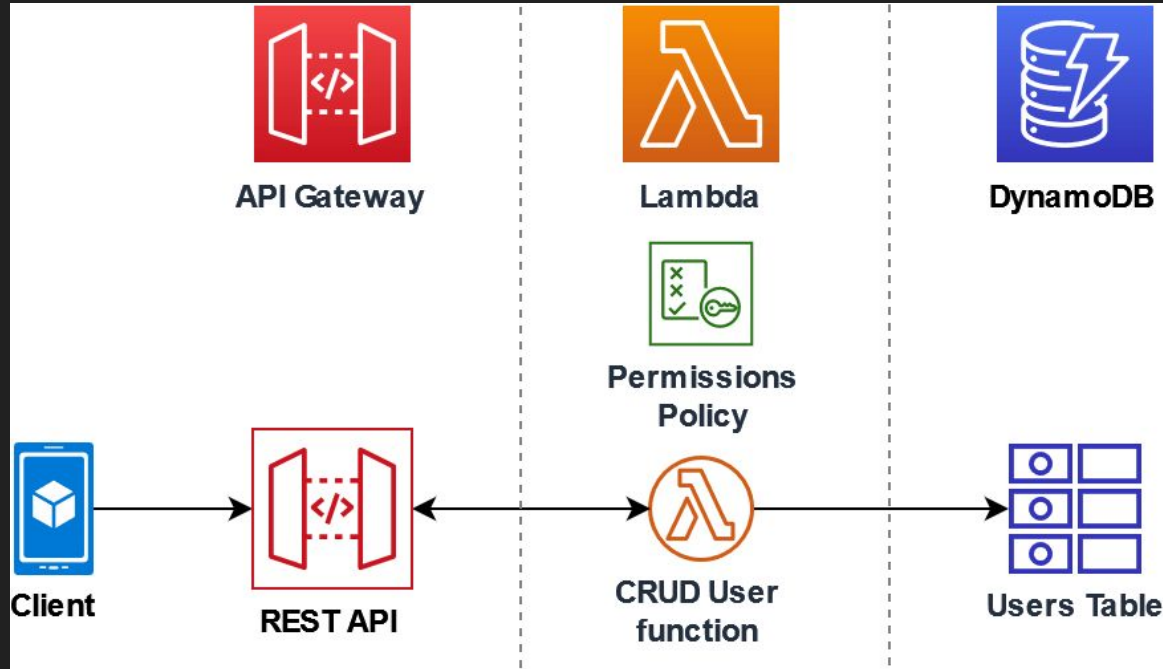
Lambda Example 1:

Generating Thumbnails: Automatically resize images uploaded to S3.

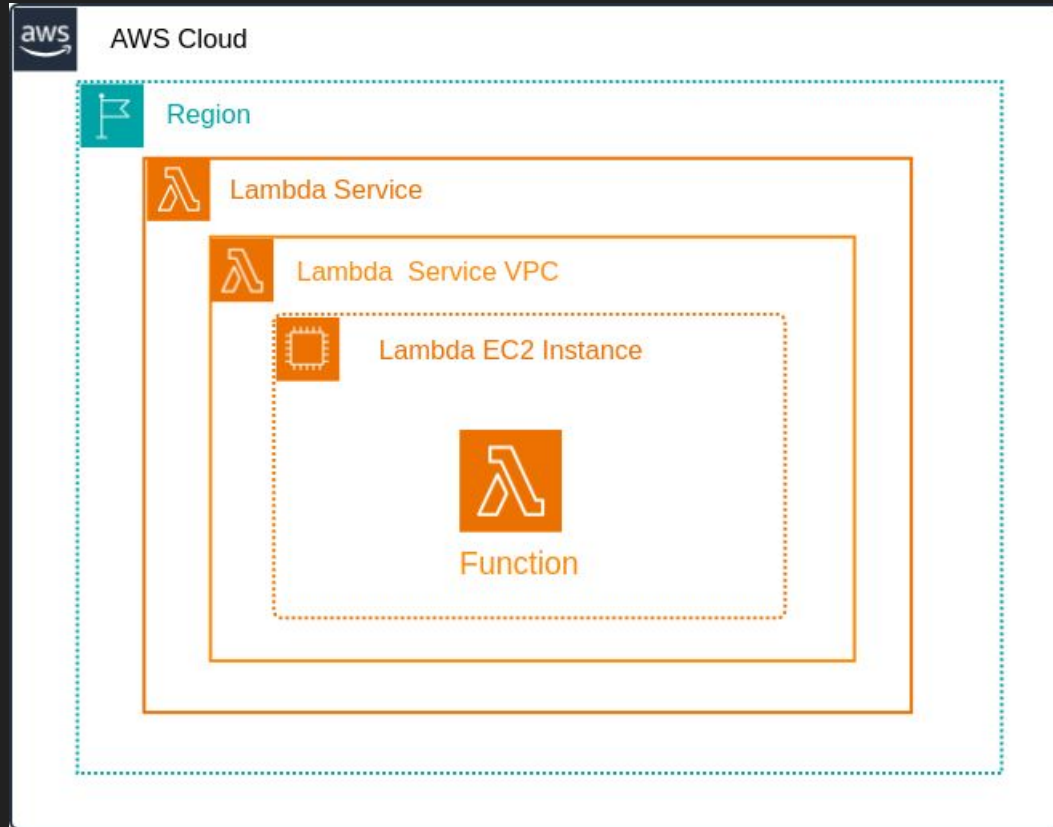


Lambda Example 2:

Build REST API with AWS Lambda and AWS API Gateway



Lambda Architecture

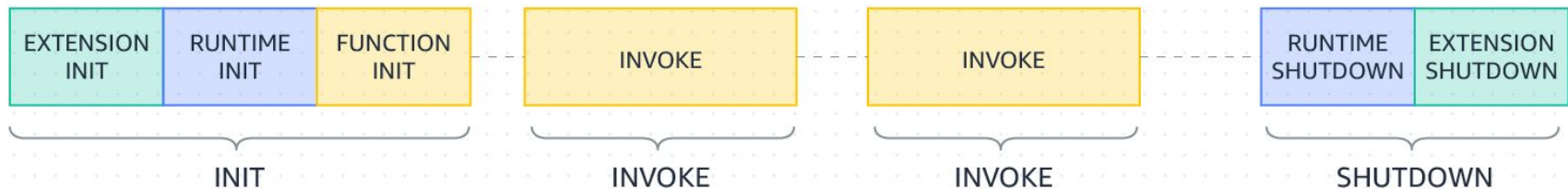


SERVERLESS

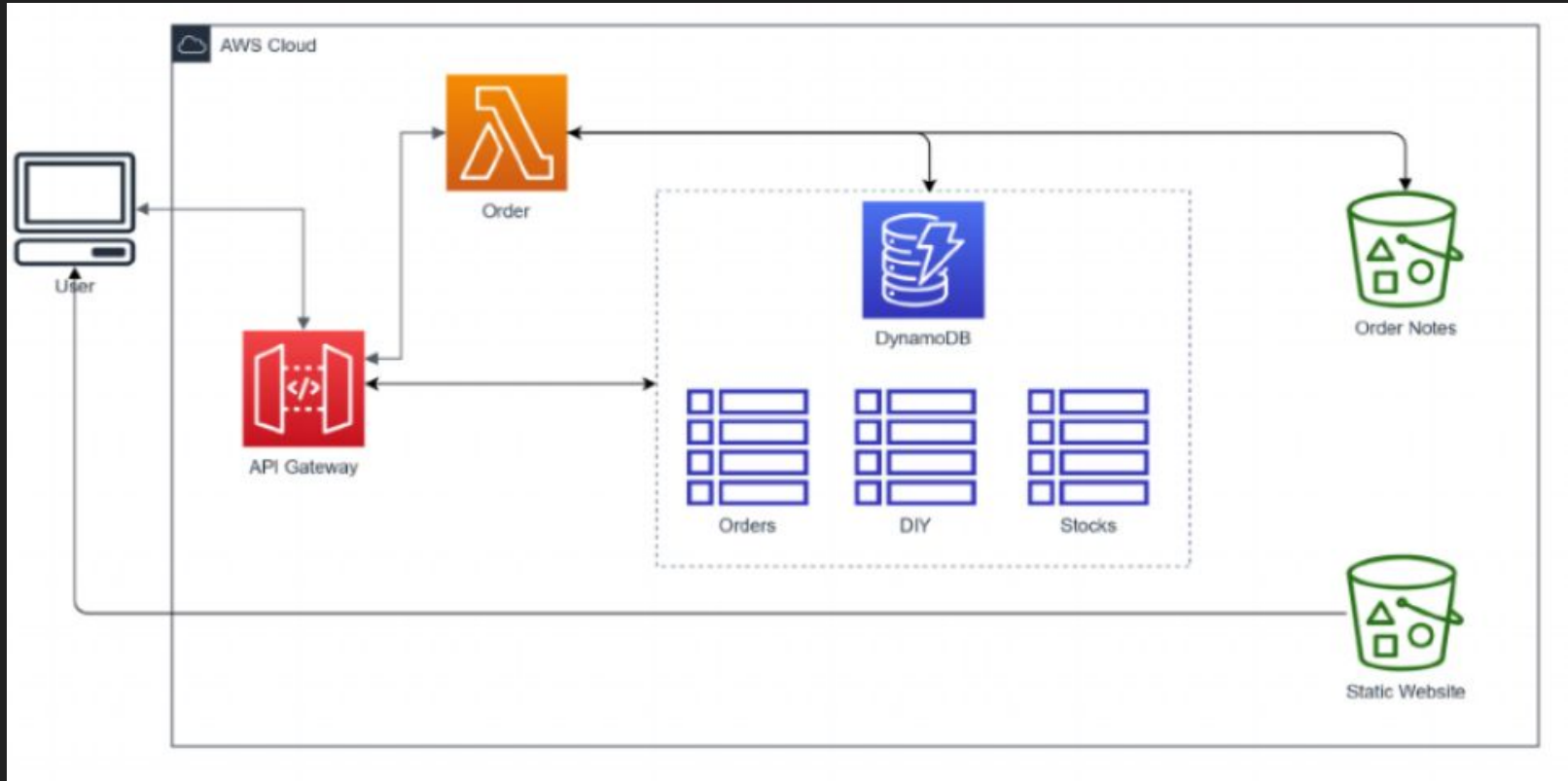
**IS "NOT" NO SERVER. IT'S NO SERVER
FOR "YOU" TO MANAGE**

generator.net

Lambda execution environment lifecycle



Demo



Thank you!

Questions?