What Is Lambda?

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- Data Centres
- Hardware
- Assembly Code/Protocols
- High Level Languages
- Operating Systems
- Application Layer/AWS APIs
- AWS Lambda

What Is Lambda?

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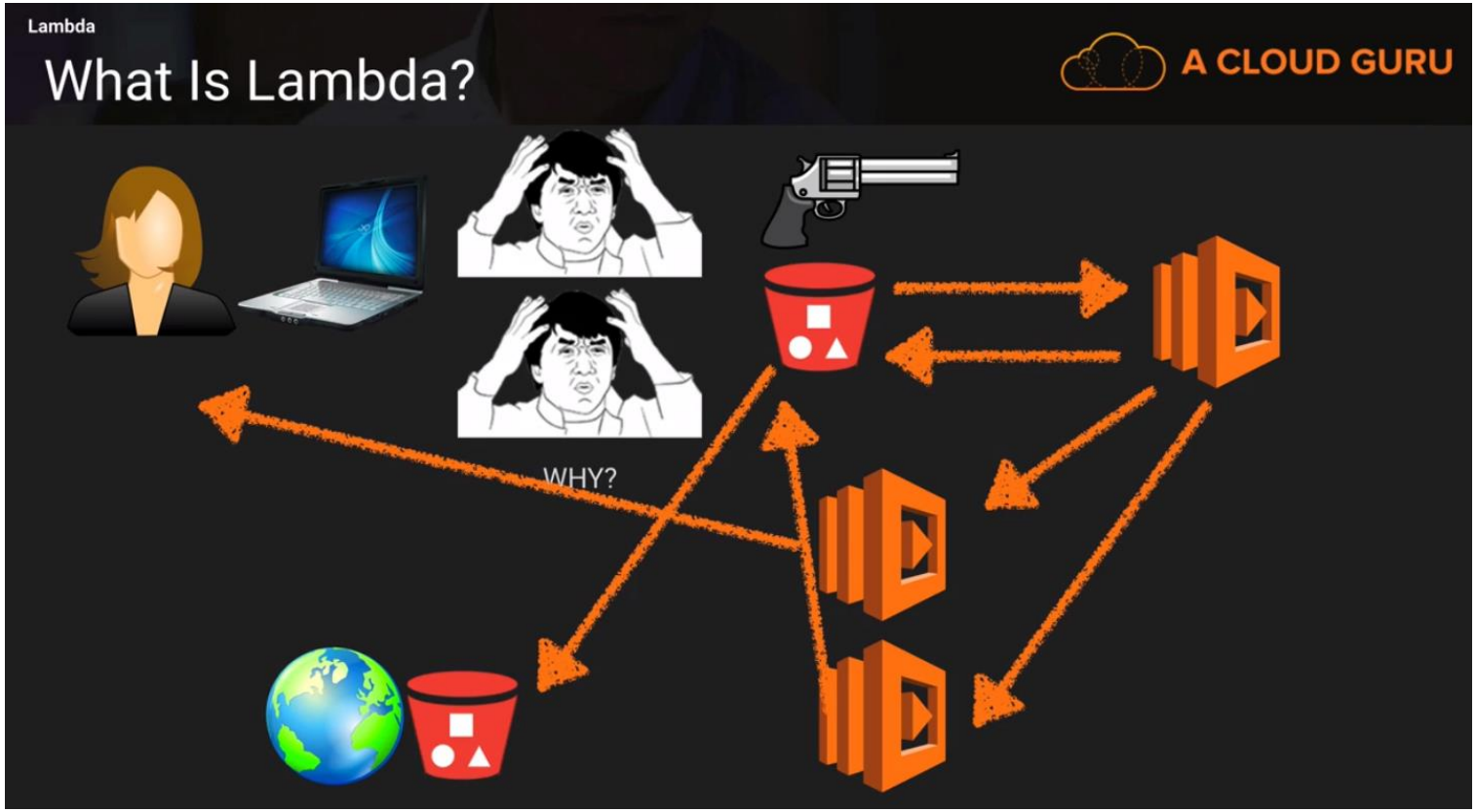
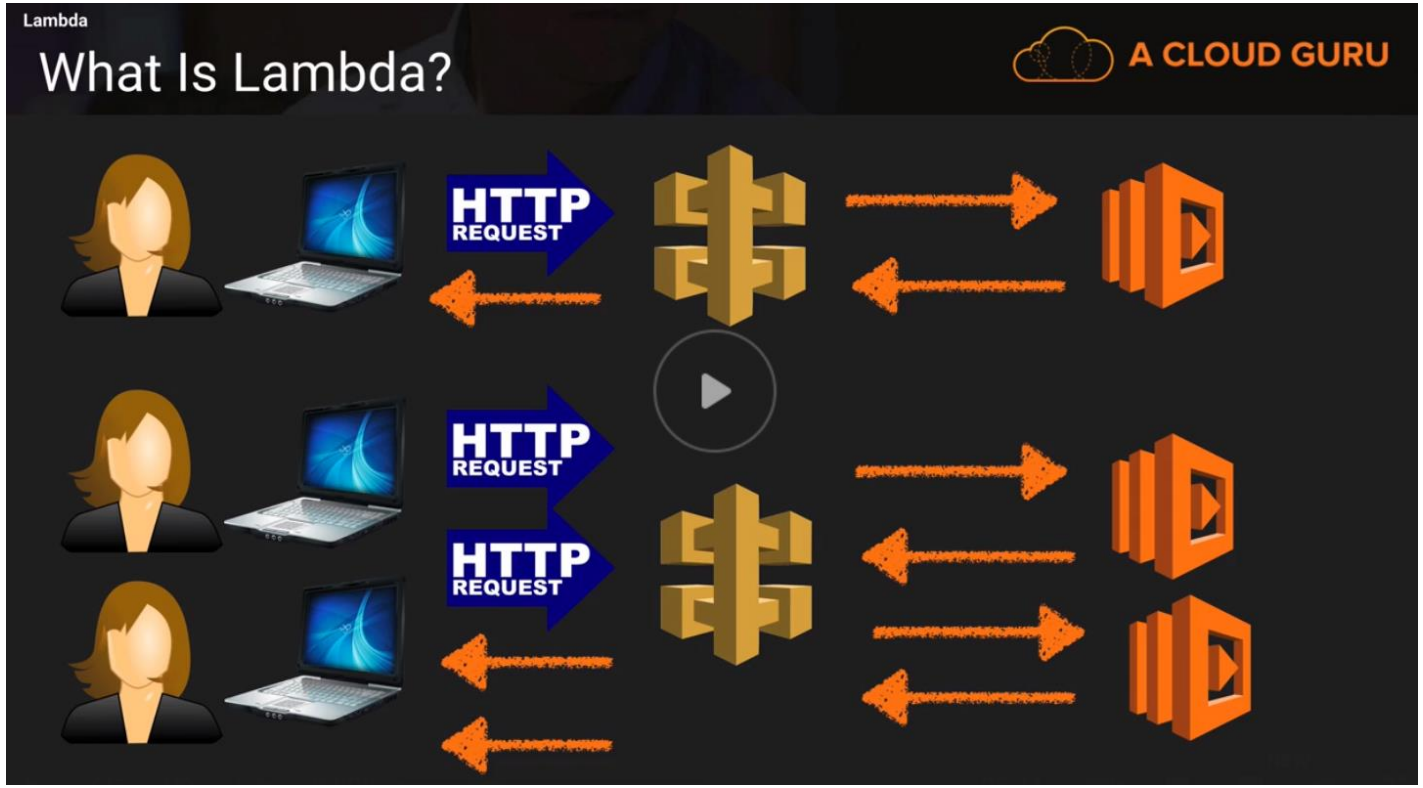
AWS Lambda is a compute service where you can upload your code and create a Lambda function. AWS Lambda takes care of provisioning and managing the servers that you use to run the code. You don't have to worry about operating systems, patching, scaling, etc. You can use Lambda in the following ways.

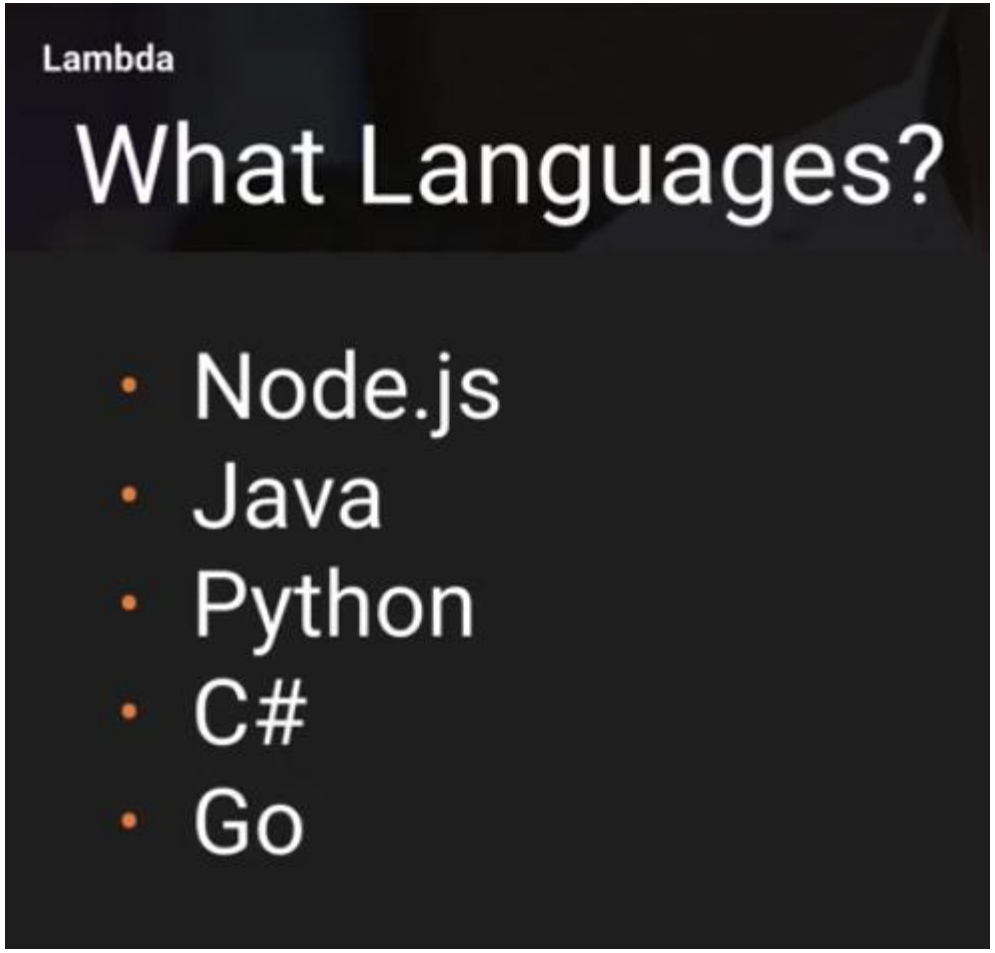
- As an event-driven compute service where AWS Lambda runs your code in response to events. These events could be changes to data in an Amazon S3 bucket or an Amazon DynamoDB table.
- As a compute service to run your code in response to HTTP requests using Amazon API Gateway or API calls made using AWS SDKs. This is what we use at A Cloud Guru.



User wants to create a meme.
This meme is stored in s3 bucket.
This s3 bucket triggers the lambda function. This lambda function takes the image and the text that user sent to the service.
This lambda function returns the image and text by triggering another lambda function back to the user. Lambda function can trigger another lambda function and store it in s3 bucket worldwide.
This is a serverless meme website.



User makes http request to the api gateway. This gateway triggers lambda function and the information is sent back to the user via api gateway.
Similary there can be two http request made to api gateway. This gateway triggers 2 lambda function parallelly(code is same) – one function responding to one request and another function responding to another request. The information is sent to api gateway and then to users.


Lambda
What Languages?
Node.js
Java
Python
C#
Go

How Is Lambda Priced?

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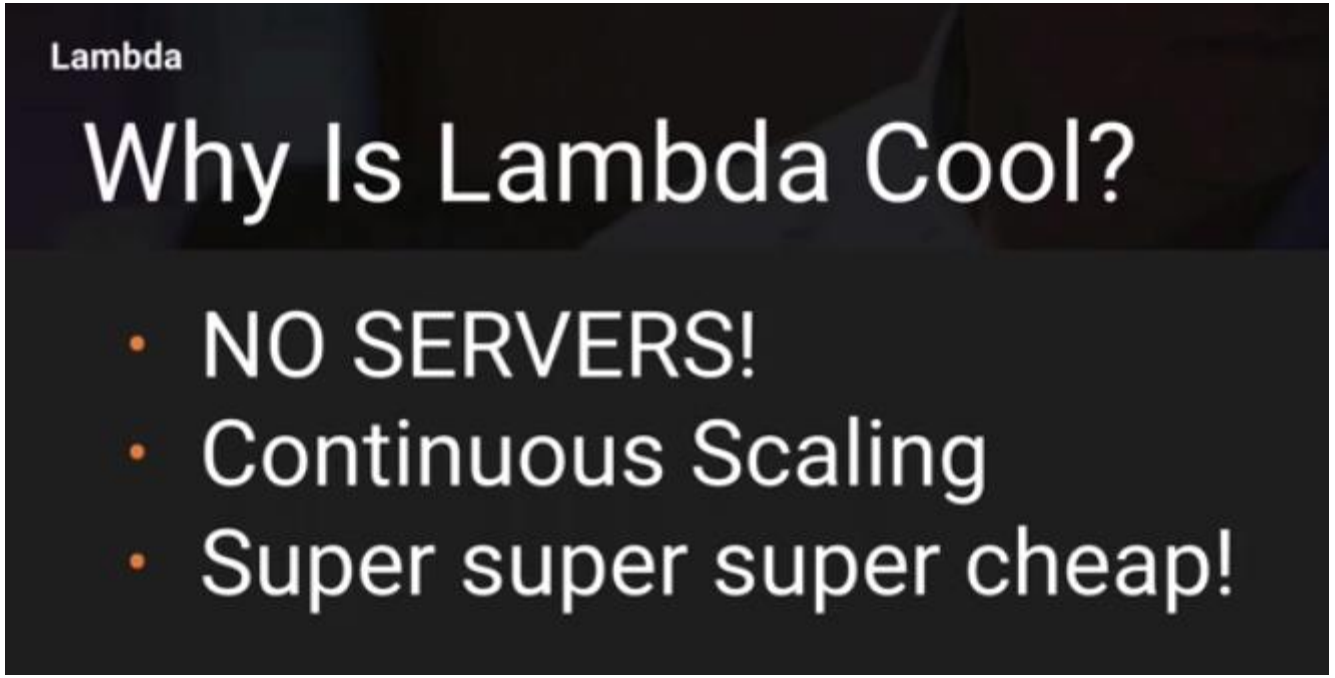
- Number of requests
  - First 1 million requests are free. $0.20 per 1 million requests thereafter.

- Duration
  - Duration is calculated from the time your code begins executing until it returns or otherwise terminates, rounded up to the nearest 100ms. The price depends on the amount of memory you allocate to your function. You are charged $0.00001667 for every GB-second used.


Lambda
Why Is Lambda Cool?
NO SERVERS!
Continuous Scaling
Super super super cheap!

Lambda - Exam Tips

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- Lambda scales out (not up) automatically
- Lambda functions are independent, 1 event = 1 function
- Lambda is serverless
- Know what services are serverless!
- Lambda functions can trigger other lambda functions, 1 event can = x functions if functions trigger other functions

- Architectures can get extremely complicated, AWS X-ray allows you to debug what is happening
- Lambda can do things globally, you can use it to back up S3 buckets to other S3 buckets etc
- Know your triggers