Lambda

What is Lambda?

Simplified Definition:
Lambda is **serverless** computing. It is the next generation of cloud computing that will replace EC2 instances (for the most part).
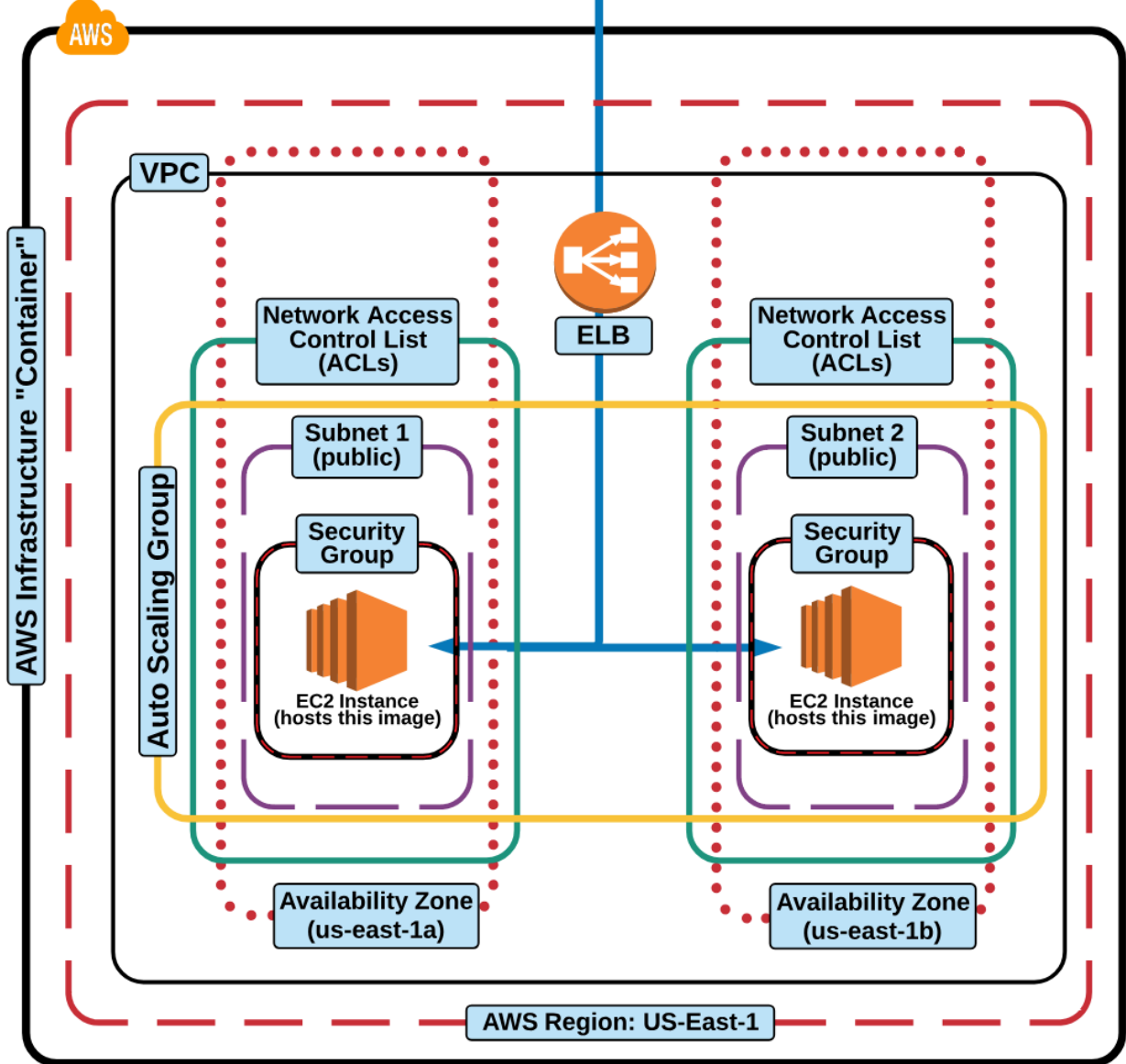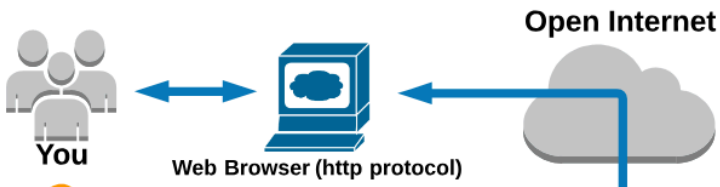
AWS Definition:
"AWS Lambda is a compute service that lets you **run code without provisioning or managing servers**. AWS Lambda **executes your code only when needed and scales automatically**, from a few requests per day to thousands per second. **You pay only for the compute time you consume - there is no charge when your code is not running**. With AWS Lambda, you can run code for virtually any type of application or backend service - all with zero administration. AWS Lambda **runs your code on a high-availability compute infrastructure and performs all of the administration of the compute resources**, including server and operating system maintenance, capacity provisioning and automatic scaling, code monitoring and logging. All you need to do is supply your code in one of the languages that AWS Lambda supports (currently Node.js, Java, C# and Python)."

Lambda

EC2/Lambda Comparison:
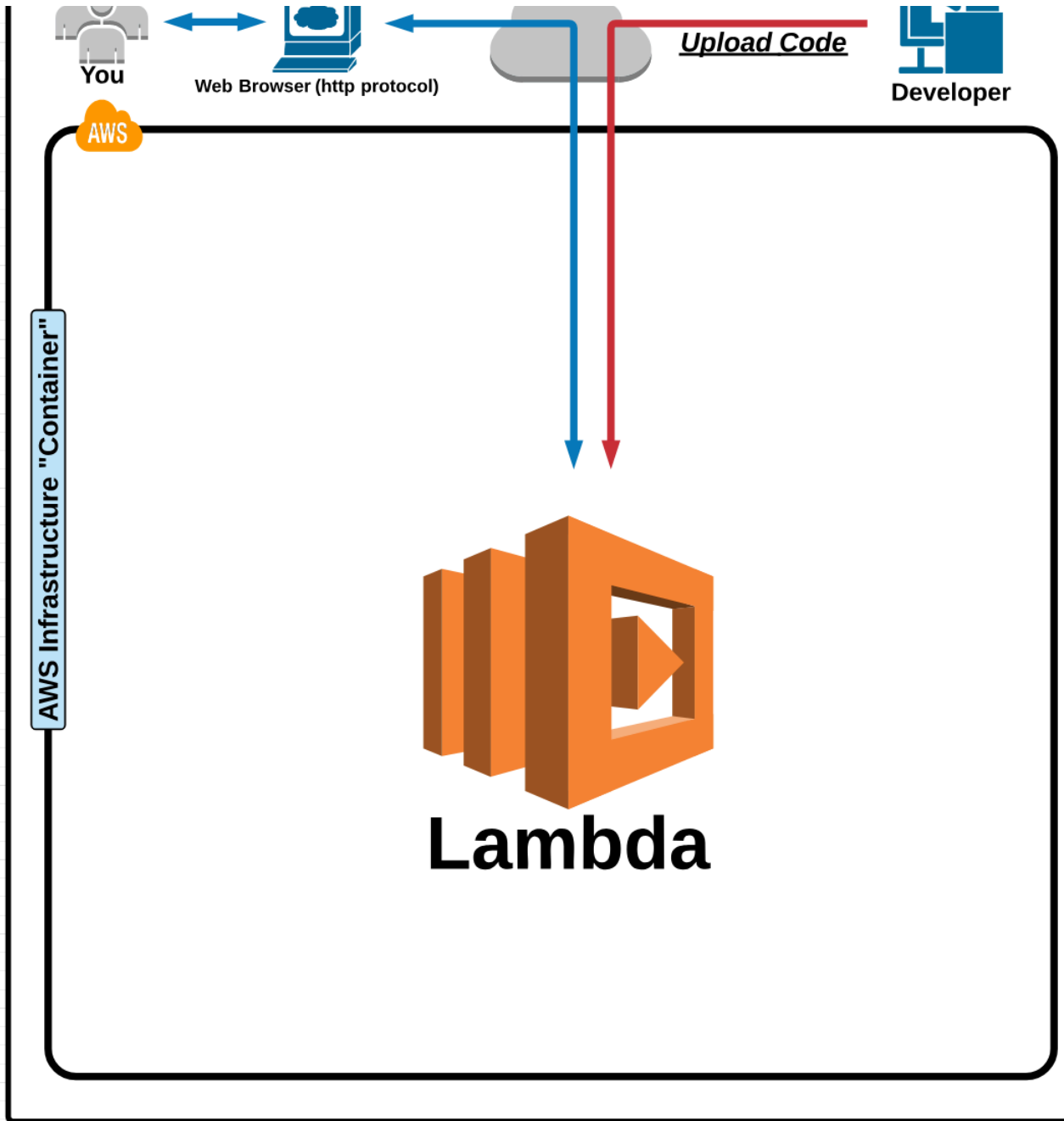
Open Internet

You

Web Browser (http protocol)

AWS

AWS Infrastructure "Container"

VPC

ELB

Auto Scaling Group

Network Access Control List (ACLs)

Network Access Control List (ACLs)

Subnet 1 (public)

Subnet 2 (public)

Security Group

Security Group

EC2 Instance (hosts this image)

EC2 Instance (hosts this image)

Availability Zone (us-east-1a)

Availability Zone (us-east-1b)

AWS Region: US-East-1

EC2/Lambda Comparison:

Open Internet

You

Web Browser (http protocol)

Upload Code

Developer

AWS

AWS Infrastructure "Container"

Lambda

Benefits & Use Cases of Lambda:

Additional Benefits:

(1) No servers to manage
(2) Continuous scaling
(4) Subsecond Metering
(3) Integrates with almost all other AWS services

Primary User Cases:

(1) Data Processing

(2) Real-time file processing

(3) Real-time stream processing

(4) Build serverless backends for web, mobile, IOT, and 3rd party API request.