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Why Serverless?

No infrastructure provisioning,
no management

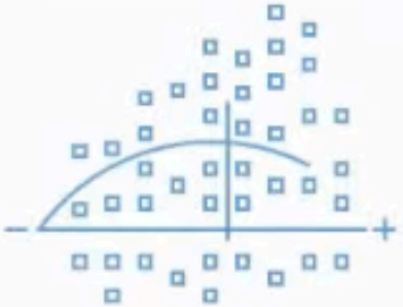
Automatic scaling

Pay for value

Highly available and secure

What are customers building with Serverless?

IT Automation



Data processing

Web applications

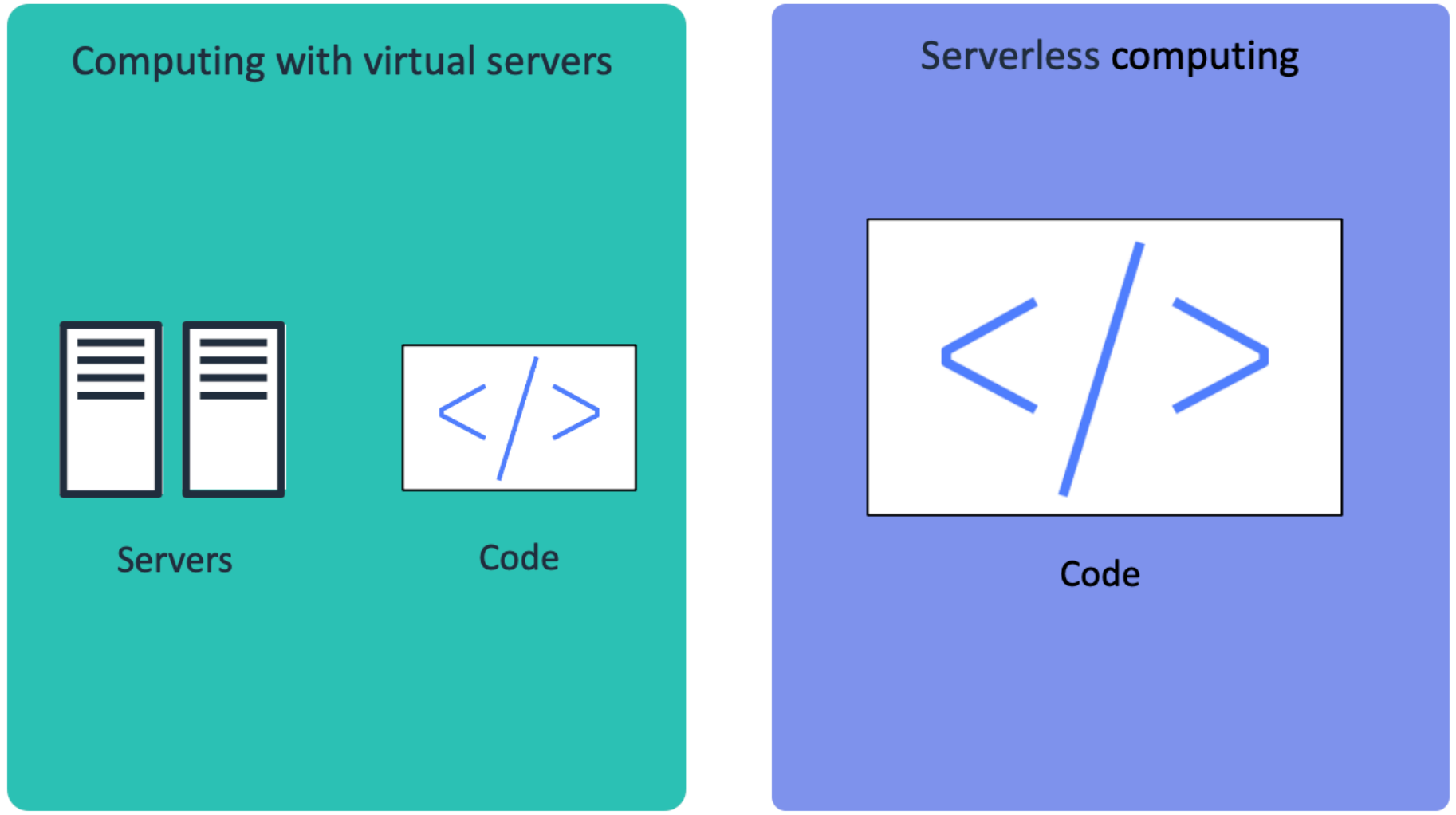
Machine Learning

Amazon Lambda

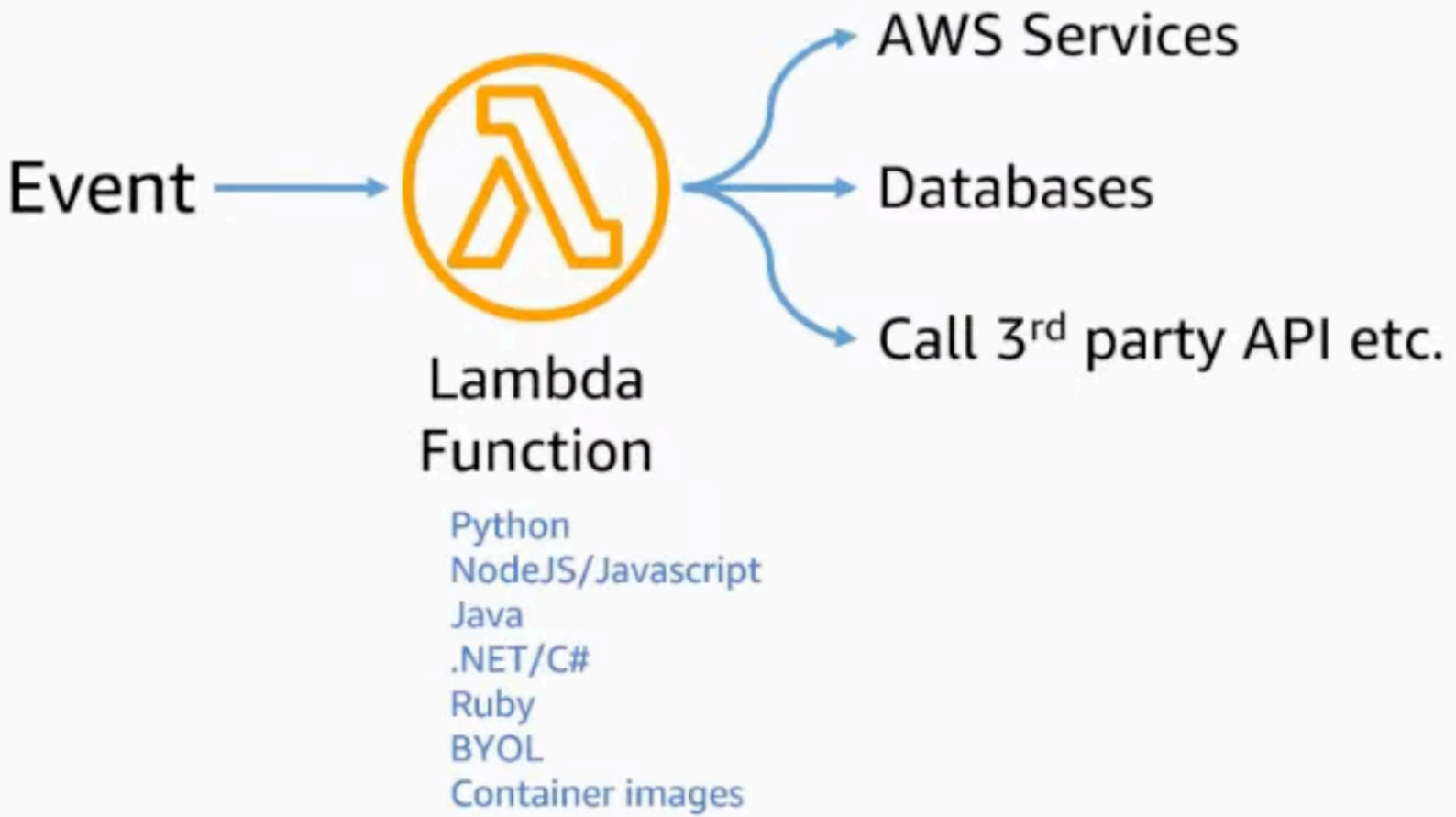
- Introduction
- What is AWS Lambda?
- Its Advantages

Serverless computing

- Highly available
- Fully managed by AWS



What is Lambda? – High level view

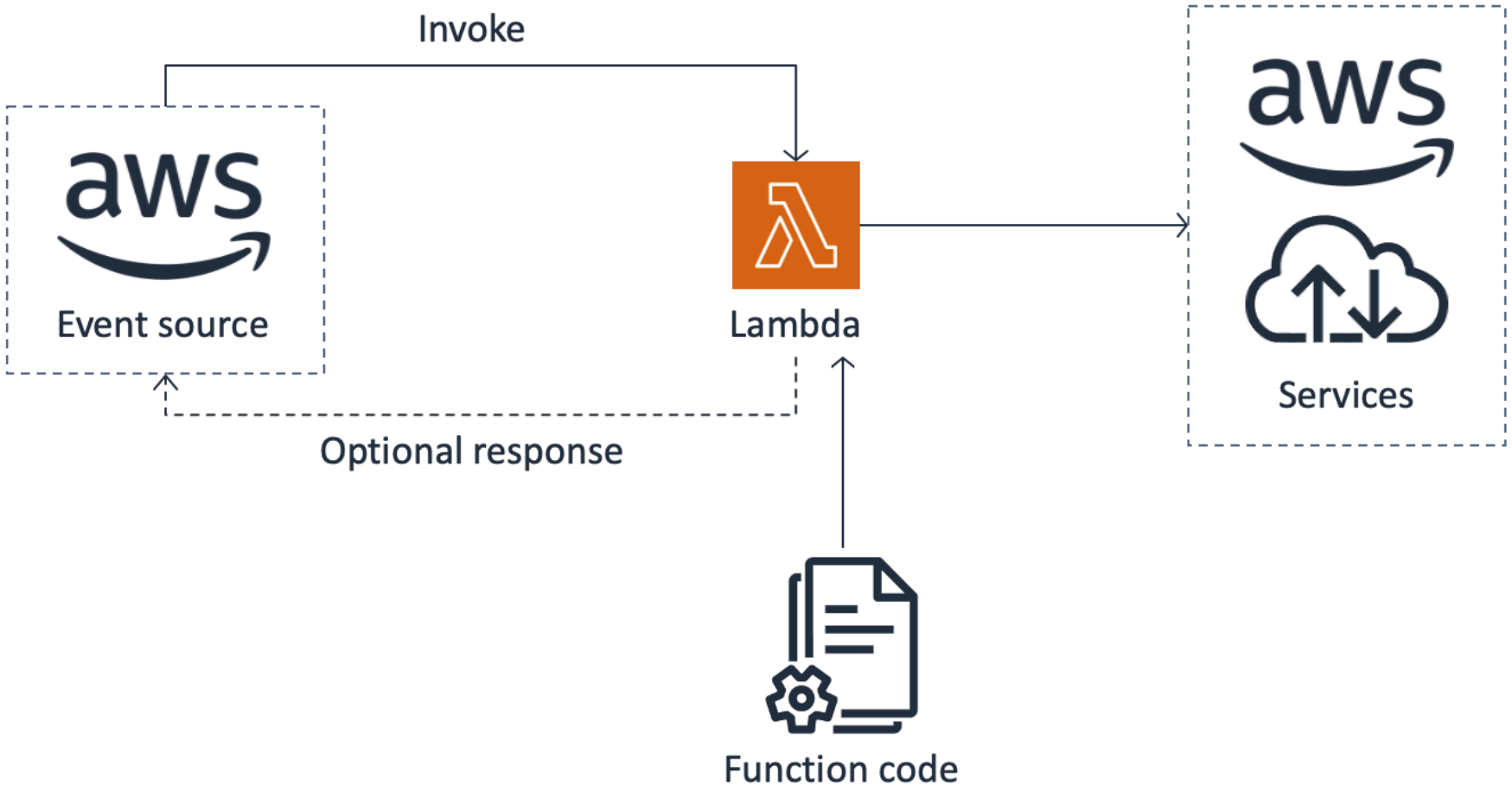


What is AWS Lambda:

- AWS Lambda is a compute service that lets you run code without provisioning or managing servers.
- With AWS lambda, you can run code for virtually any type of application or backend service – all with zero administration.

AWS Lambda

- Serverless compute
- Supports Node.js, Java, Python, C#, Go, PowerShell, Ruby, and more
- Runs for up to 15 minutes
- Supports up to 10 GB memory



Event source examples

Amazon DynamoDB

AWS CodeCommit

Amazon Simple Email Service (Amazon SES)

Amazon S3

AWS IoT Services

Amazon Alexa

Amazon CloudWatch

AWS CloudFormation

Amazon Simple Queue Service (Amazon SQS)

Amazon Cognito

Amazon API Gateway

AWS CloudTrail

Amazon EventBridge

Amazon Simple Notification Service (Amazon SNS)

Application Load Balancer

AWS Step Functions

Amazon Kinesis

Use cases

Web applications

Backends

Data processing

Chatbots

Amazon Alexa

IT automation

AWS Lambda manages all the administration it manages -

i. Provisioning and capacity of the compute fleet that offers a balance of memory, CPU, network and other resource.
ii. Server and OS Maintenance
iii. High availability and automatic scaling
iv. Monitoring fleet health
v. Applying security patches
vi. Deploying your code
vii. Monitoring and logging your lambda functions.
viii. Aws lambda runs your code on a high-availability compute infrastructure.

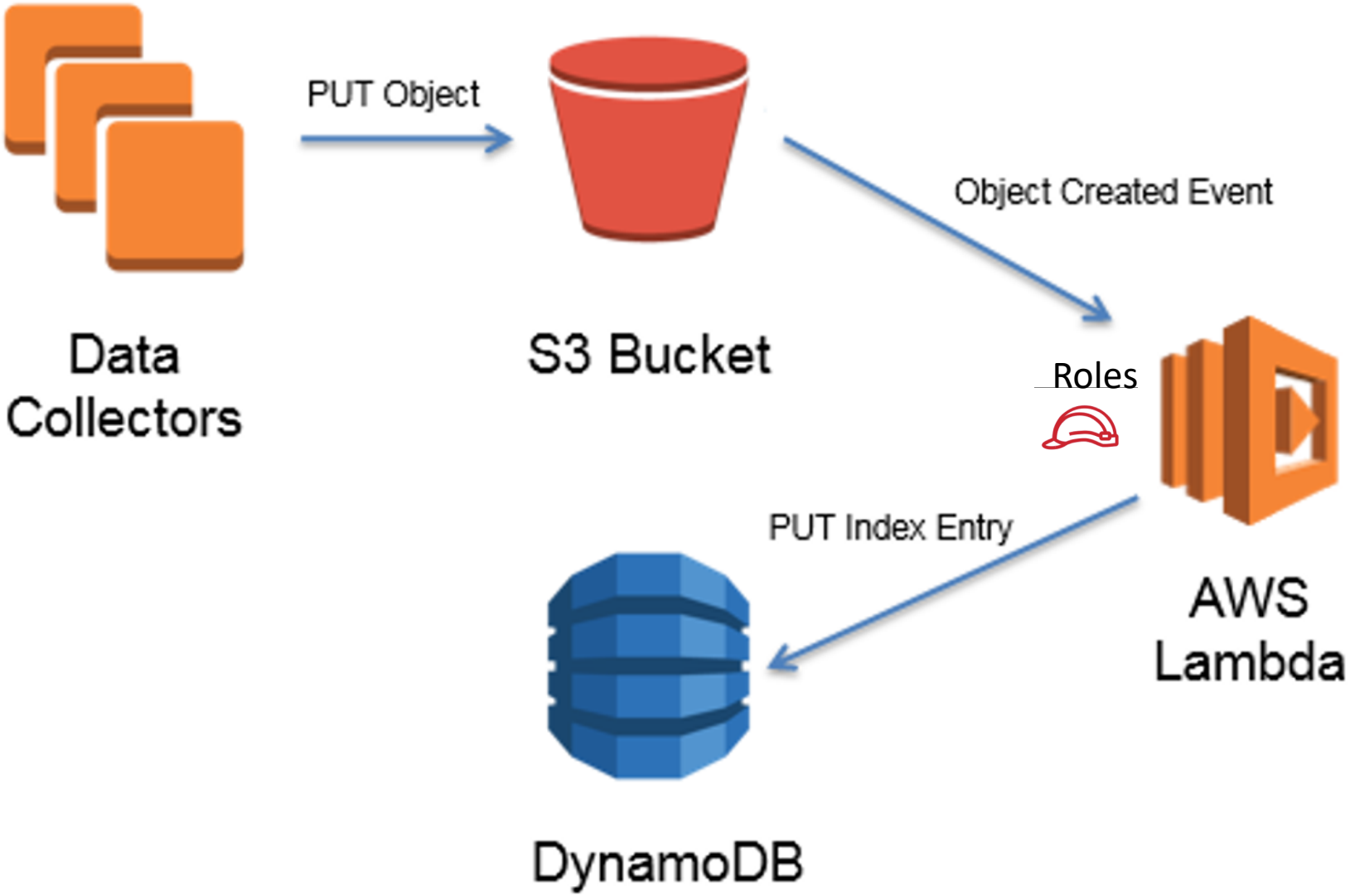
- AWS lambda runs your code on a high availability compute infrastructure
- AWS lambda executes your code only when needed and scales automatically from a few requests per day to thousands per seconds.
- You pay only for the compute time you consume – no charge when your code is not running
- All you need to do is supply your code in the form of one or more lambda functions to AWS lambda.

AWS Lambda

- AWS lambda is platform-as-a-service
- It supports only limited languages (Node JS, python, java, ruby, c#, Go and powershell
- Write your code and push the code into AWS lambda.

AWS EC2

- Aws ec2 is a IAAS
- No environment restrictions, you can run any code or language.
- For the first time in EC2, you have to choose the OS and install all the software required and then push your code in EC2


PUT Object
Object Created Event
Data Collectors
S3 Bucket
Roles
AWS Lambda
PUT Index Entry
DynamoDB

Steps to work with Lambda

- IAM role : create role : dynamodb full access
- Lambda: create function….author from scratch…function name (any name)….runtime (python 3.6)…..change default execution role (attached IAM role)…….. and create function.

- Add trigger (like. S3 bucket)
- Create Dynamo db (table name & partition key ”item name” (should be same what ever is available in lambda code) table name and partition key / item name copy from code.