

Serverless image processing

Group -12



Agenda

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- Architecture Overview
- Amazon S3 Buckets
- Lambda Function
- Benefits of Serverless
- Conclusion

Introduction

A serverless image processing application is a cloud-based solution that automates the resizing and optimization of images when they are uploaded to an Amazon S3 bucket. This approach eliminates the need for maintaining dedicated servers, as the application relies on cloud services like AWS Lambda to perform the image processing tasks.



Architecture overview

- The serverless architecture involves AWS Lambda functions triggered by events from Amazon S3 buckets.
- This event-driven approach ensures immediate processing upon image uploads.

Amazon S3 Bucket

- The purpose of the Amazon S3 (Simple Storage Service) bucket in the context of the serverless image processing application is to serve as a central storage location for both the original and processed images.
- It acts as a durable and scalable repository that enables seamless uploading, storage, and retrieval of images.



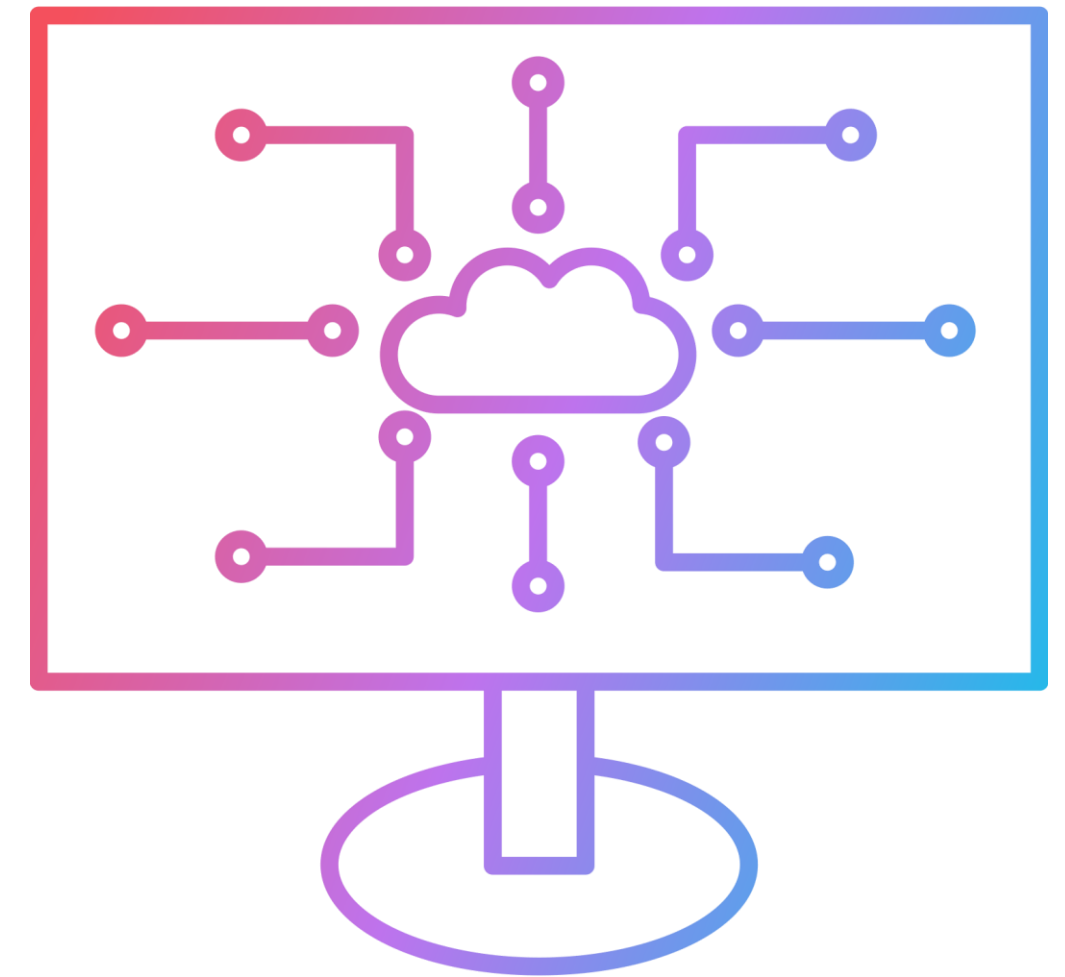
Lambda function

- Event-driven: Responds to events like HTTP requests or S3 uploads.
- Languages: Supports Node.js, Python, Java, etc.
- Create Lambda function: Define handler, code, configure triggers.
- Deployment: Upload the code.



Benefits of Serverless

- Scalability: Automatic scaling handles varying workloads without manual intervention.
- Cost Efficiency: Pay only for actual usage, reducing infrastructure costs.
- Simplified Development: Focus on code, not server management, for faster development.
- Global Availability: Deploy globally for improved reach and availability, with reduced vendor lock-in.



Conclusion

In conclusion, serverless image processing using AWS Lambda and S3 is a powerful solution that offers scalability, cost-effectiveness, and ease of use.





Thank you

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STATIC WEBSITE

PRESENTED BY GROUP 12

A background image showing two women with blonde hair smiling and looking at a laptop screen in an office environment. The woman in the foreground is wearing a grey and white striped blazer. The background features a white brick wall and a dark wood panel.

INTRODUCTION

A Static website is a collection of the web pages that contains text, images, video.

Each website has specific URL.

Every page has to be saved separately on the server.

WHY AWS?

01.

EASY TO CREATE

02.

USE HTML CODE TO
DESIGN WEBSITE

03

DOESN'T REQUIRE
PROGRAMMING TO
CREATE WEBSITE

04

USED IN
INDIVIDUAL FIELDS



ADVANTAGES

IT IS EASY TO DEVELOP.

CHEAP TO DEVELOP.

CHEAP TO HOST.

IT IS COST EFFECTIVE.

EASIER TO CREATE

|





REQUEST



.html

.html

.html



RESPONSE

main.js

style.css

A static site is a website built with pages of static content, or plain html, Javascript, or CSS code. This content stays consistent regardless of the user or where the user is and offers little interactivity.



Website



S3 Bucket



S3



Benefits of Hosting a Static Website on S3

Highly Available: Because AWS S3 allows for unlimited object storage and replicates each object across multiple availability zones.

Security: AWS S3, which is managed and maintained by AWS, is a highly secure service that can be made even more secure by turning on bucket encryption.

Easy to manage and maintain: When necessary, AWS S3 offers a simple console interface for managing and maintaining bucket objects.

The AWS logo is displayed in white lowercase letters. Below the text is the orange curved arrow, which is part of the Amazon logo. The background of the entire image is a dark blue with a faint, glowing circuit board pattern. In the top right corner, there is a decorative graphic consisting of several thin, light blue lines radiating from a single point.

aws

MARKET DOMINANCE

AWS is widely considered as the leader in the cloud computing industry, holding a substantial market share.

COST MANAGEMENT

AWS provides various pricing models and tools to help customers manage their costs effectively.

CONCLUSION

AWS Simple Storage Service (S3) supports static web hosting. A static website has static content created in HTML, CSS, and JavaScript.

S3 does not support dynamic web hosting, where the website content is generated dynamically by server-side scripts.



THANK YOU