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# Running Docker Container-Based Applications with AWS Lambda Functions



Ayush Agrawal · [Follow](#)

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AWS Lambda is a serverless compute service that enables developers to run code without managing servers. Traditionally, Lambda has been used for running stateless code and performing short-lived tasks. However, with the introduction of AWS Lambda with Container Image support, you can now use Lambda to run Docker container-based applications seamlessly. In this blog, we will explore how to leverage Lambda functions to deploy and run Docker container-based applications, providing developers with even more flexibility and scalability.

## Advantages of Using Lambda with Docker Containers

- 1. Simplified Deployment:** Packaging your application in a Docker container allows you to bundle all dependencies and configurations, making it easier to deploy and manage across different environments.
- 2. Consistency and Isolation:** Running your application in a Docker container ensures consistency and isolation, as the environment remains the same during development, testing, and production.
- 3. Cost-Effectiveness:** With AWS Lambda's serverless architecture, you pay only for the compute resources used during the execution of your Docker container, making it cost-effective for short-lived tasks and event-driven workloads.
- 4. Scalability:** AWS Lambda automatically scales your container-based application based on incoming requests, ensuring optimal performance even during high

traffic spikes.

## Step-by-Step Guide to Run Docker Container-Based Applications with Lambda

### Step 1: Prepare Your Docker Container

Create a Docker image for your application that includes all necessary dependencies, libraries, and configurations. Ensure your Dockerfile is set up correctly, and the application runs smoothly within the container.

### Step 2: Build and Push the Docker Image

Build the Docker image locally and push it to a container registry like Amazon Elastic Container Registry (ECR) or Docker Hub. The container registry will host your Docker image, allowing AWS Lambda to access it during execution.

### Step 3: Create an AWS Lambda Function

1. Navigate to the AWS Management Console and open the Lambda service.
2. Click “Create function” and choose “Container image” as the runtime.
3. Provide a name for your Lambda function and select the container image URI from the container registry where your Docker image is hosted.

### Step 4: Configure the Lambda Function

1. Define the desired memory allocation and timeout for your Lambda function

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### Step 5: Test and Monitor

1. Test your Lambda function by invoking it with sample input data to ensure it's executing your Docker container successfully.
2. Monitor the Lambda function's performance using AWS CloudWatch metrics and logs.

AWS Lambda with Container Image support opens up new possibilities for running Docker container-based applications in a serverless environment. By leveraging the benefits of Docker containers and Lambda's serverless architecture, you can simplify the deployment process, ensure consistency, and achieve cost-effective scalability for your applications. As you explore Lambda with Docker containers,

keep in mind the unique characteristics of serverless architecture, such as statelessness and short-lived execution, to design applications that fully leverage the power and flexibility of this combination.

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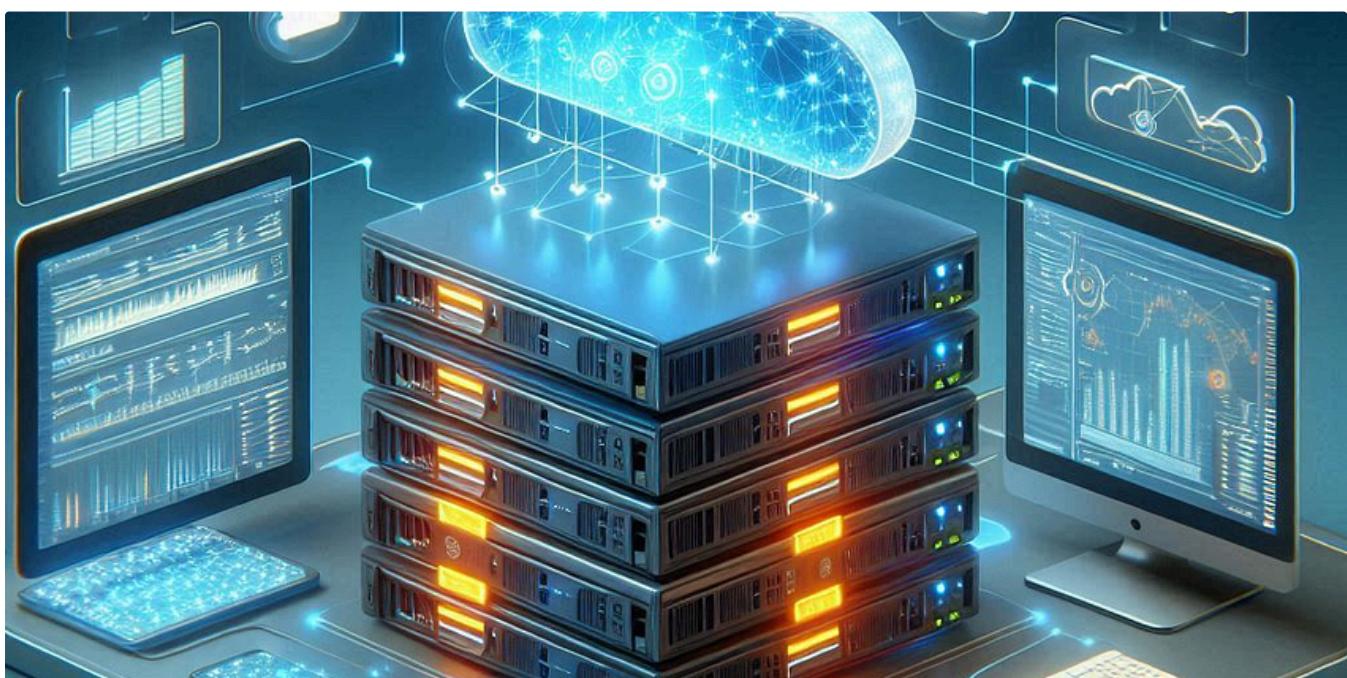
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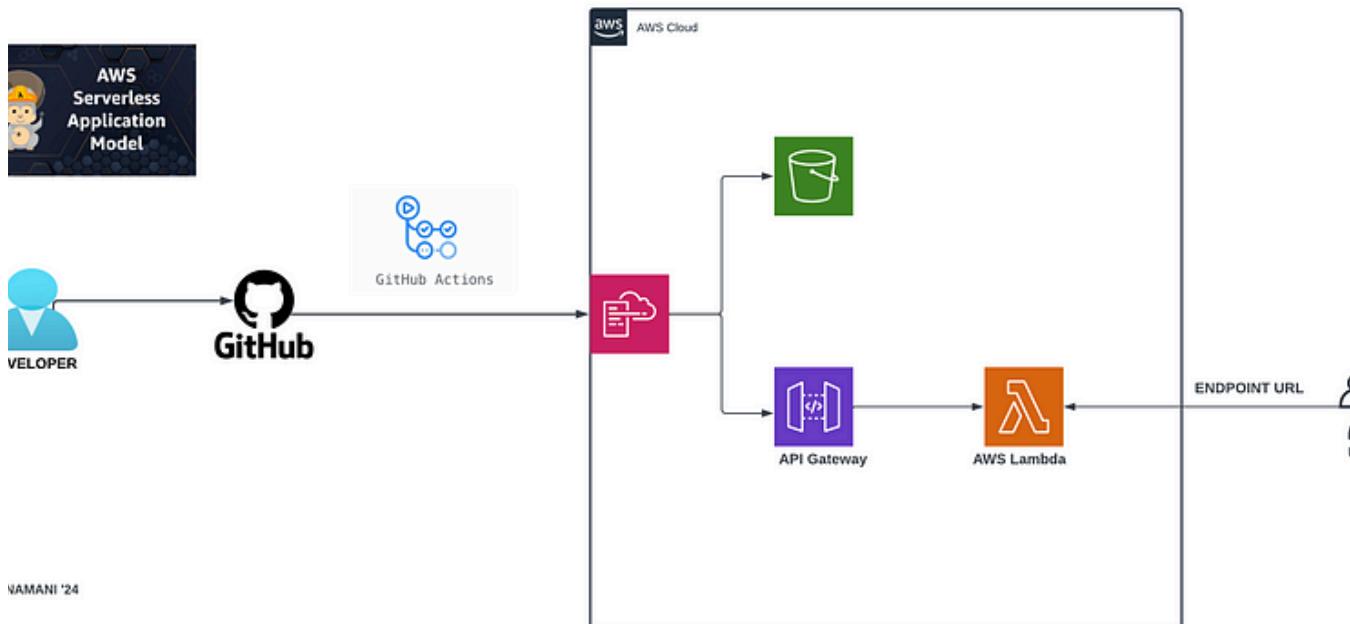
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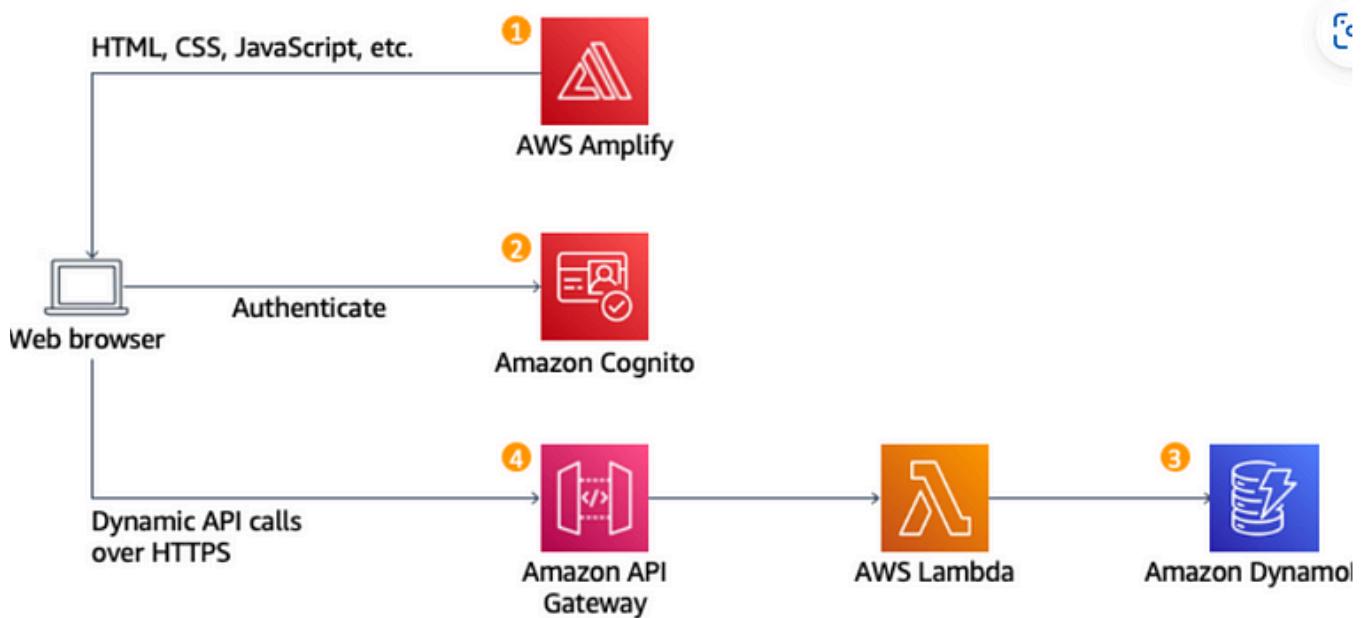
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