

LAMBDA DOCUMENTATION

What is AWS Lambda?

AWS Lambda is a serverless compute service provided by AWS. It lets you run code without provisioning or managing servers. You write your code, upload it, and Lambda handles the rest.

Key Features

Components of Lambda

1. Function - Your code packaged in a ZIP or container image.
2. Trigger - Event sources like S3, API Gateway.
3. Execution Role - IAM permissions.
4. Runtime - The language environment.
5. Environment Variables - Store configuration data.

How Lambda Works (Step-by-Step)

Example Use Cases

- Image processing on S3 uploads
- Real-time data transformation
- Web/mobile app backends
- Chatbots or Alexa skills

Creating a Lambda Function

1. Go to AWS Console > Lambda

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2. Click 'Create Function'
3. Choose 'Author from scratch'

Enter name, runtime, and role

4. Write code in editor
5. Set trigger source
6. Click 'Deploy' and test

Sample Code (Python)

```
def lambda_handler(event, context):  
  
    return {  
  
        'statusCode': 200,  
  
        'body': 'Hello from Lambda!'  
  
    }
```

Related Services

S3 - Trigger Lambda on file upload

API Gateway - Create REST/HTTP APIs

DynamoDB - Trigger on DB changes

CloudWatch - Logging and monitoring

Best Practices

- Keep functions short and focused
- Use environment variables

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- Monitor via CloudWatch
- Handle exceptions and log errors
- Set proper timeouts and memory