



# Developing Lambda Functions with LocalStack

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# AWS Lambda



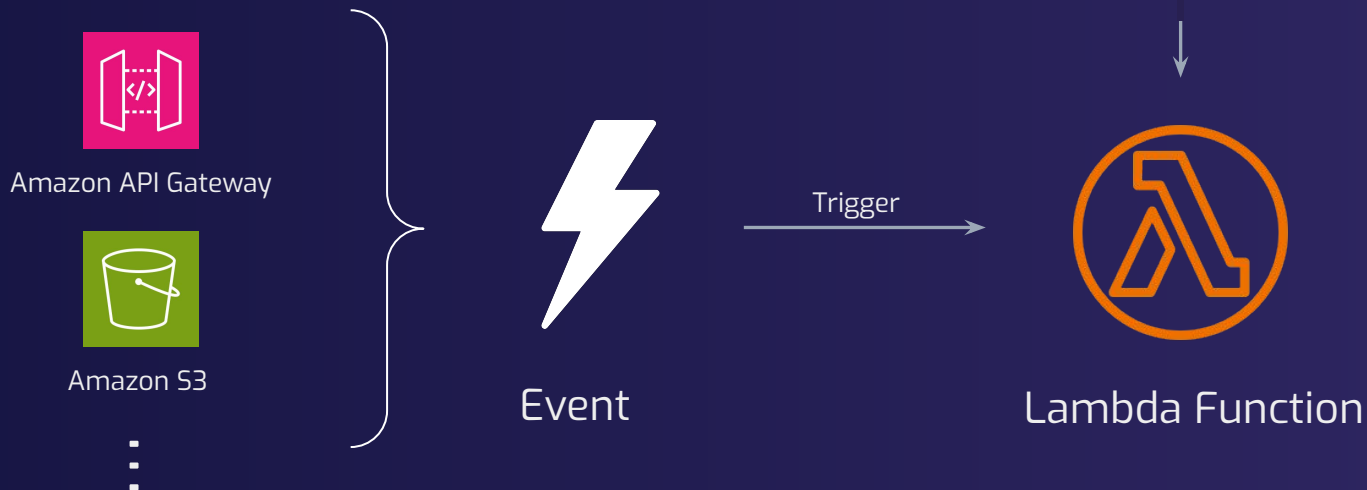
on

# LocalStack



# What is AWS Lambda?

An event-driven serverless computing platform.



# LocalStack Lambda Highlights ✨

✓ **Feature coverage**: 95% of all Lambda API operations

⚖️ **AWS Parity**: API behaves like in AWS with 90% parity test coverage

🧠 **Lambda Runtimes**: 100% of AWS-managed runtimes supported


📦 **Official AWS Images**: Docker base images pulled from `public.ecr.aws/lambda/`

🦋 **ARM Support**: Run arm64 and x86\_64 Lambda functions

⇒ **Lambda Concurrency**: Provisioned and reserved concurrency

🔌 **Lambda Extensions API**: Customize Lambda execution environment

# LocalStack Lambda Features

 **Hot Reloading**: Continuously apply code changes to Lambda functions and layers (Pro)




 **Remote Debugging**: Attach a debugger to your Lambda functions

 **VSCode Extension**: Deploy and invoke your Lambda from your IDE

 **Cloud Pods**: Share a snapshot of your Lambda infrastructure (Pro)

 **Full Control**: Configure your Lambda setup (e.g., limits, cold starts)

DEMO

Lambda  on LocalStack   
works like at AWS 



DEMO

# LocalStack accelerates your Lambda Development



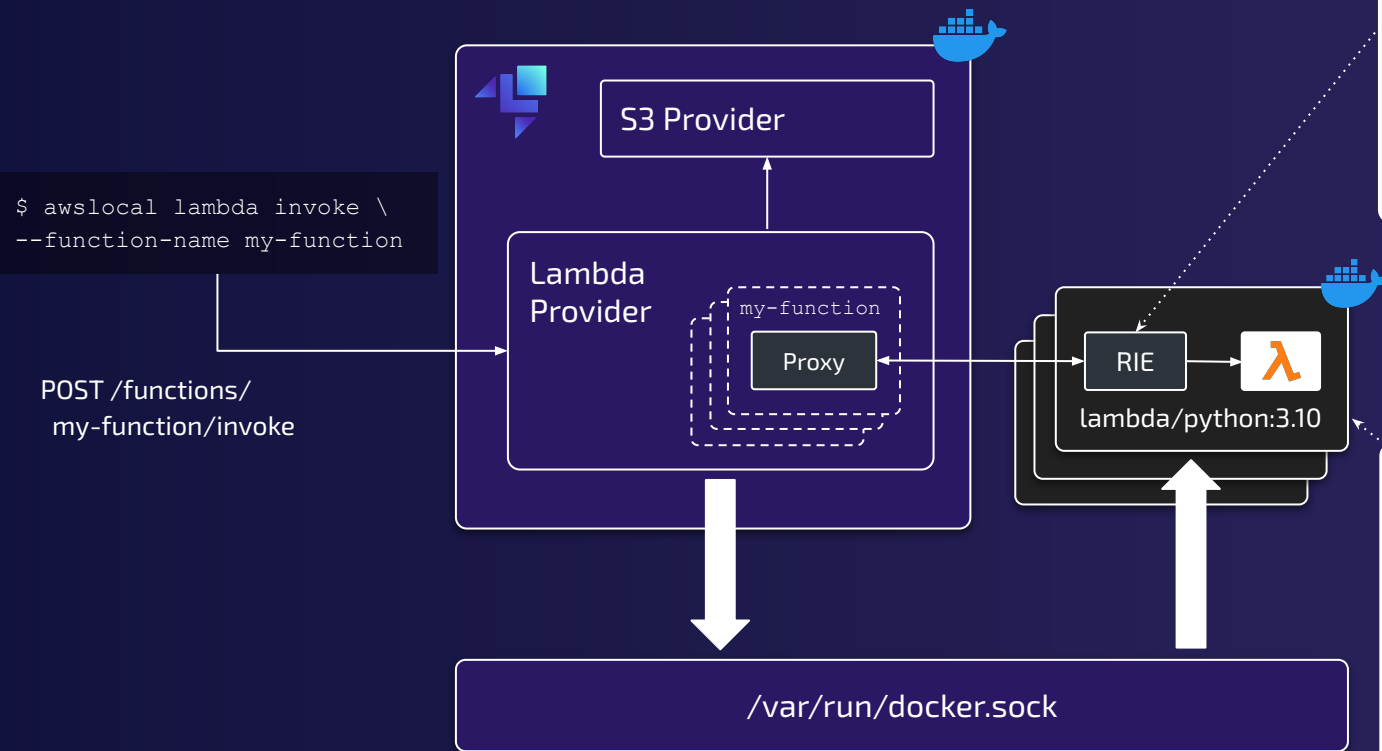


DEMO

# LocalStack enables Debugging Lambda Functions



# How does LocalStack Lambda work?



## AWS Lambda Runtime Interface Emulator

release [v1.13](#) Go [v1.19](#) license [Apache-2.0](#)

The Lambda Runtime Interface Emulator is a proxy for Lambda's Runtime and Extensions APIs, which allows customers to locally test their Lambda function packaged as a container image.

## AWS Lambda Base Container Images

AWS provided base images for Lambda contain all the required components to run your functions packaged as container images on AWS Lambda. These base images contain the Amazon Linux Base operating system, the

# Next Steps



1. Get these slides and the demo code:  
<https://github.com/joe4dev/localstack-lambda-demos>
2. Explore Lambda applications in our Developer Hub  
<https://docs.localstack.cloud/applications/>

Developer Hub

Overview  
Tutorials  
Applications

help you establish your foundations in LocalStack and offer you a wide range of use cases and scenarios, all supported by LocalStack, to help you develop and test cloud applications efficiently.

**Full-Stack application with AWS Lambda, DynamoDB & S3 for shipment validation**

Configure a CRUD web application for shipment validation

**Step-up Authentication using Amazon Cognito**

Setup a Step-up

**Serverless microservices with Amazon API Gateway, DynamoDB, SQS, and Lambda**

serverless microservices

- ☐ CloudFormation
- ☐ CloudWatch Logs
- ☐ Dynamo DB
- ☐ EventBridge
- ☐ ECR
- ☐ ECS
- ☐ Elasticsearch
- ☐ fargate
- ☐ Glue
- ☐ IAM
- ☐ Kinesis
- ☒ Lambda
- ☐ RDS
- ☐ S3
- ☐ Secrets Manager
- ☐ SES
- ☐ SageMaker
- ☐ SNS
- ☐ SQS