AWS re:Invent

DOP319-R

Building and deploying applications on AWS with Python

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Agenda

Overview of the AWS SDK for Python (boto3)

Demo app walkthrough

Application deployment

Open discussion/questions

Feel free to ask questions throughout the chalk talk

Overview of the AWS SDK for Python

aws
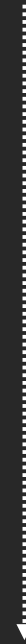
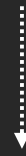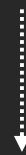# AWS SDK for Python (boto3)

AWS SDK for Python

boto3

Amazon S3 transfer manager

s3transfer

Low-level clients

botocore

Sessions and clients

Session

session = boto3.Session()

Clients

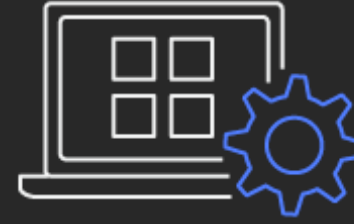session.client('ec2')   session.client('s3')   session.client('dynamodb')

Initialization

session = boto3.Session()

Handle requests

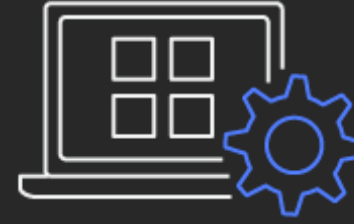session.client('ec2')

Thread-1

session.client('s3')

Thread-2

session.client('dynamodb')

Thread-3

Initialization

`session.client('s3')`

Handle requests

Thread-1   Thread-2   Thread-3

Clients are thread safe

Clients and resources

Clients

- Direct API, 1:1 mapping

- Up to date with latest APIs

- Full AWS service coverage

Resources

- Object-oriented API

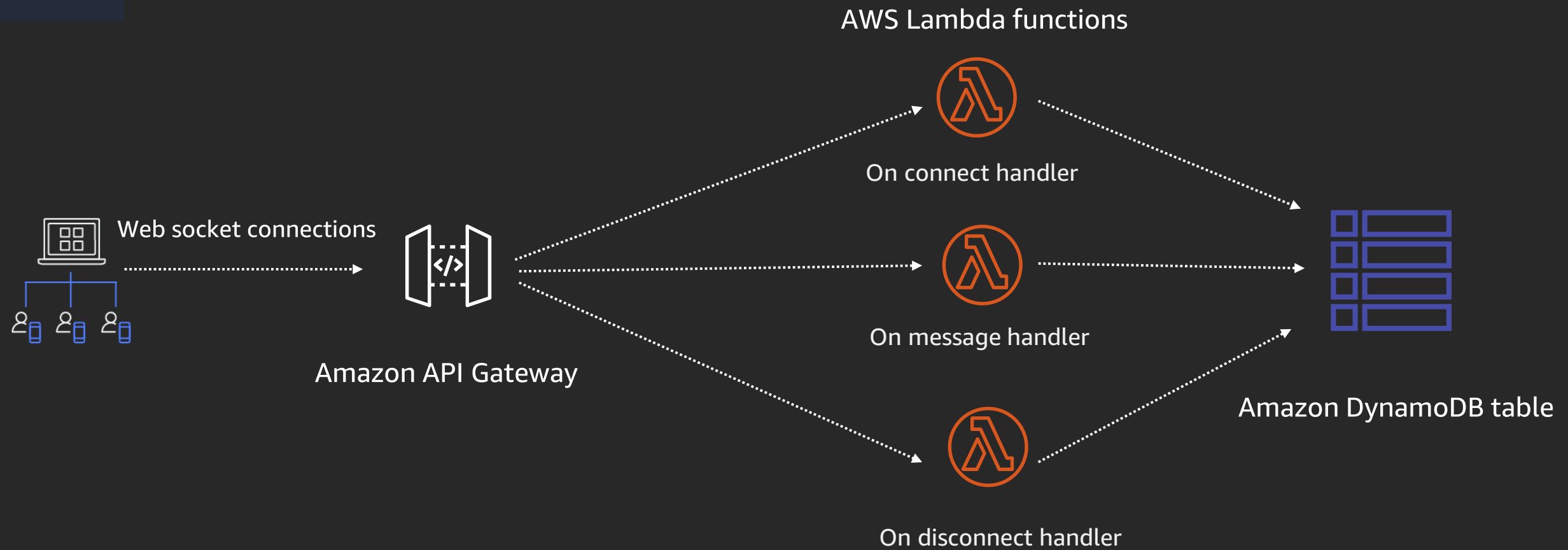- High-level abstractions

```
session.client('ec2')
```

```
session.resource('ec2')
```

Demo application
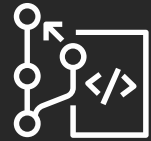
aws

CHALICE

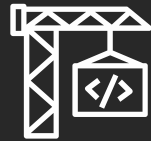Python Serverless Microframework for AWS

Chat application

Web socket connections

Amazon API Gateway

AWS Lambda functions

On connect handler

On message handler

On disconnect handler

Amazon DynamoDB table

Demo

aws

Demo application deployment

aws

	Source	AWS CodeCommit/GitHub
	Build/test	AWS CodeBuild
	Beta deploy	AWS CloudFormation
	Integration test	AWS CodeBuild
	Prod deploy	AWS CloudFormation
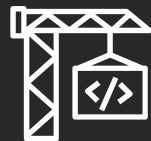
Demo

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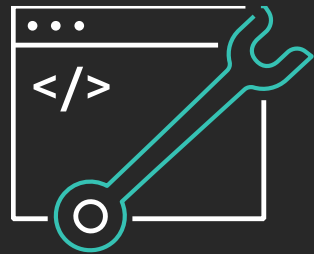
Questions/Topics of discussion

- AWS SDK best practices
- Deployment best practices
- AWS Lambda
- Amazon API Gateway

- Chalice
- Monitoring and alarms
- Amazon DynamoDB
- AWS CodePipeline

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Thank you!

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