

AWS
re:Invent

SVS327-R

Build serverless APIs with the AWS CDK

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Agenda

What are we building today?

Introduction to the AWS CDK

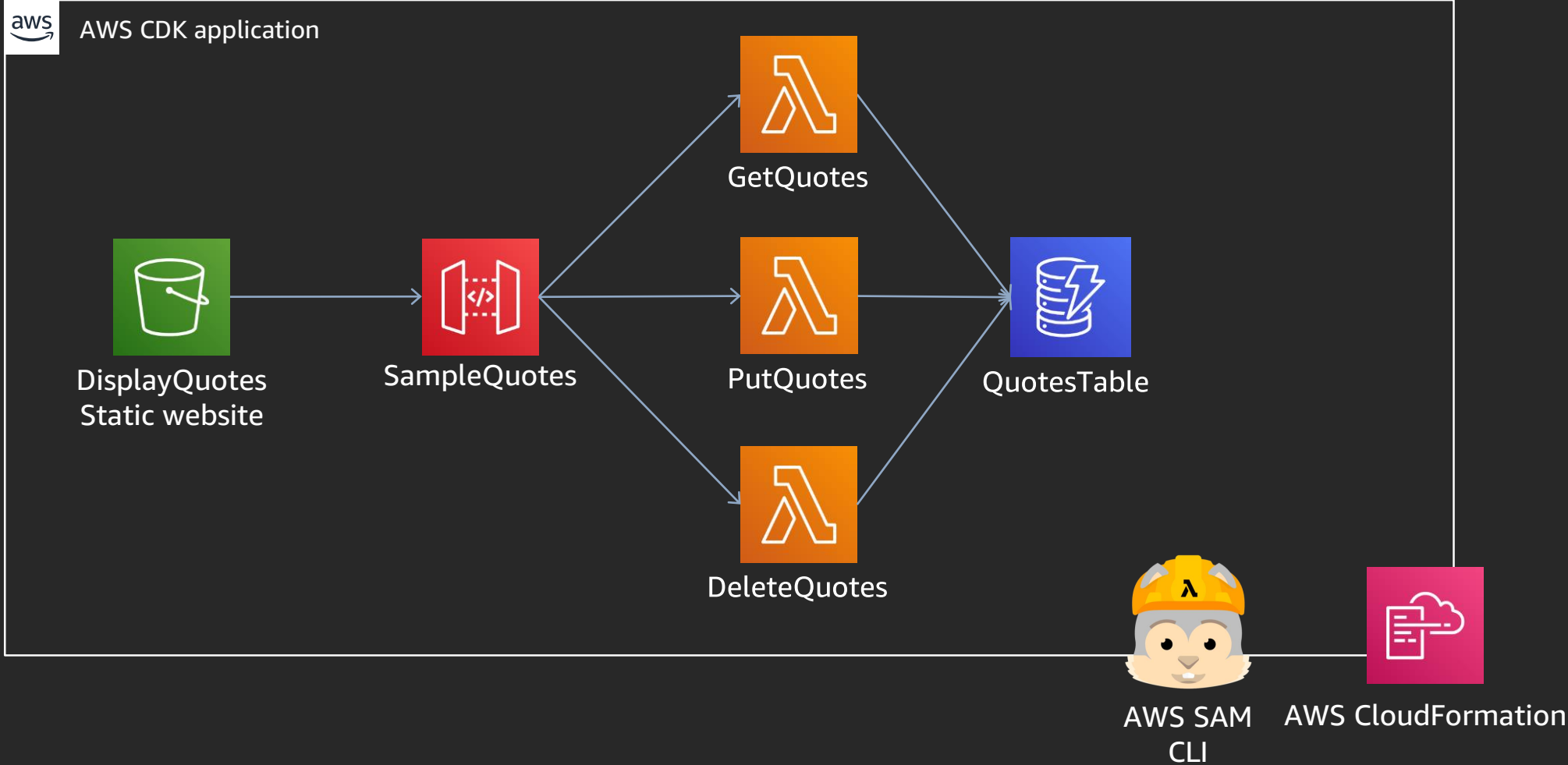
How to test your API locally

Demo

Q&A

What are we building today?

Our simple serverless project



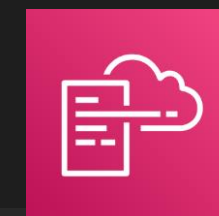
Introduction to AWS CDK

Introducing the AWS Cloud Development Kit (AWS CDK)

A multi-language software development framework for modeling cloud infrastructure as reusable components

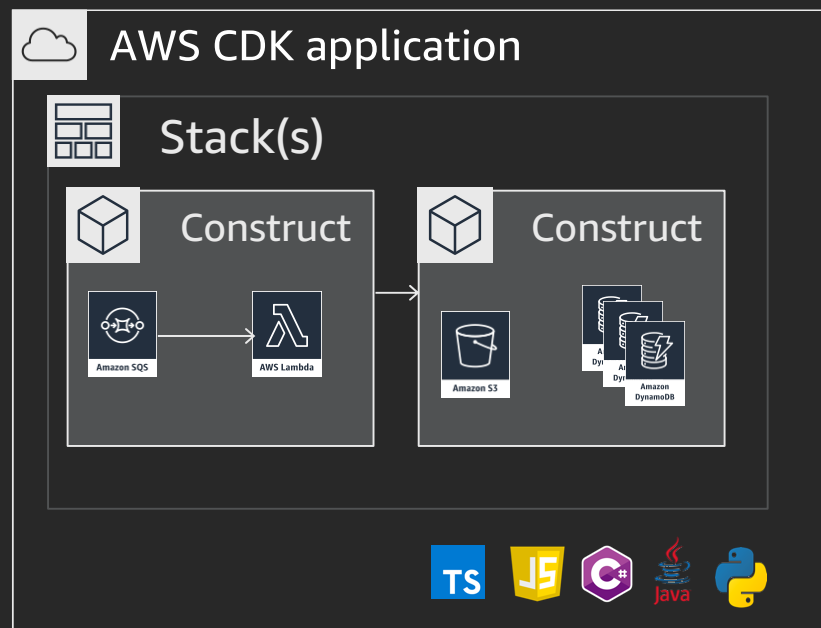


```
1 import sns = require('@aws-cdk/aws-sns');
2 import sqs = require('@aws-cdk/aws-sqs');
3 import cdk = require('@aws-cdk/cdk');
4
5 export class HelloCdkStack extends cdk.Stack {
6   constructor(scope: cdk.App, id: string, props?: cdk.StackProps) {
7     super(scope, id, props);
8
9     const queue = new sqs.Queue(this, 'HelloCdkQueue', {
10      visibilityTimeoutSec: 300
11    });
12
13    const topic = new sns.Topic(this, 'HelloCdkTopic');
14
15    topic.subscribeQueue(queue);
16  }
17 }
18
```

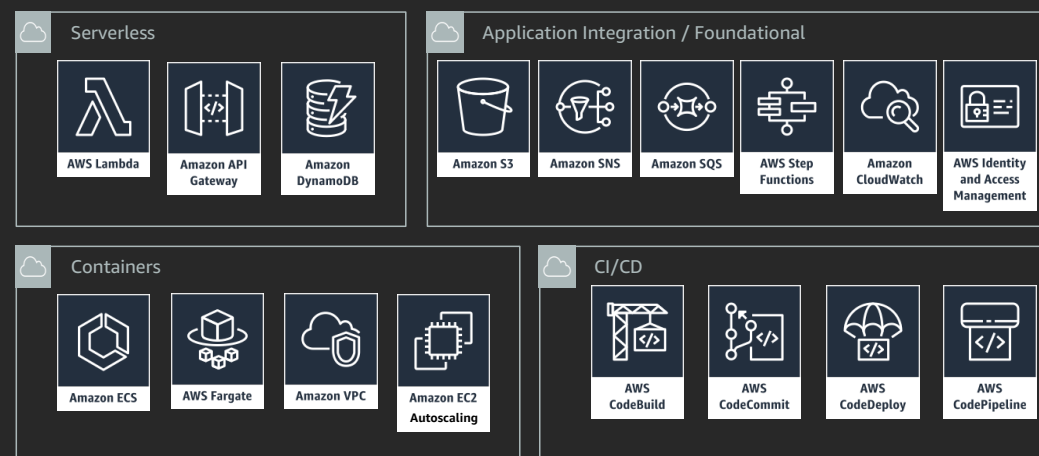


AWS CDK

Core framework



AWS Construct Library



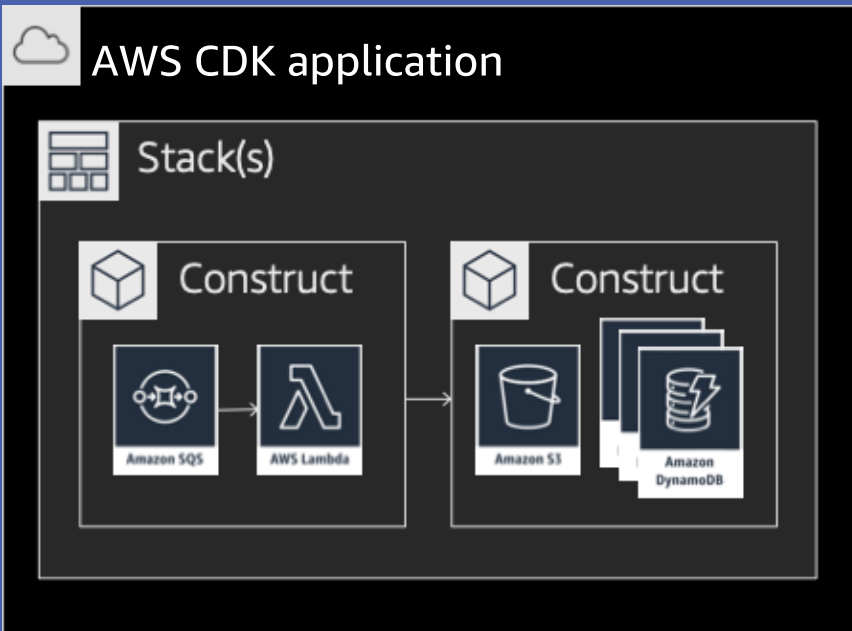
CDK CLI

```
~/Projects/hello-cdk — zsh — 80x24
~/Projects/hello-cdk
> cdk init --language typescript sample-app
Applying project template sample-app for typescript
Initializing a new git repository...
Executing npm install...
npm notice created a lockfile as package-lock.json. You should commit this file.
npm WARN hello-cdk@0.1.0 No repository field.
npm WARN hello-cdk@0.1.0 No license field.

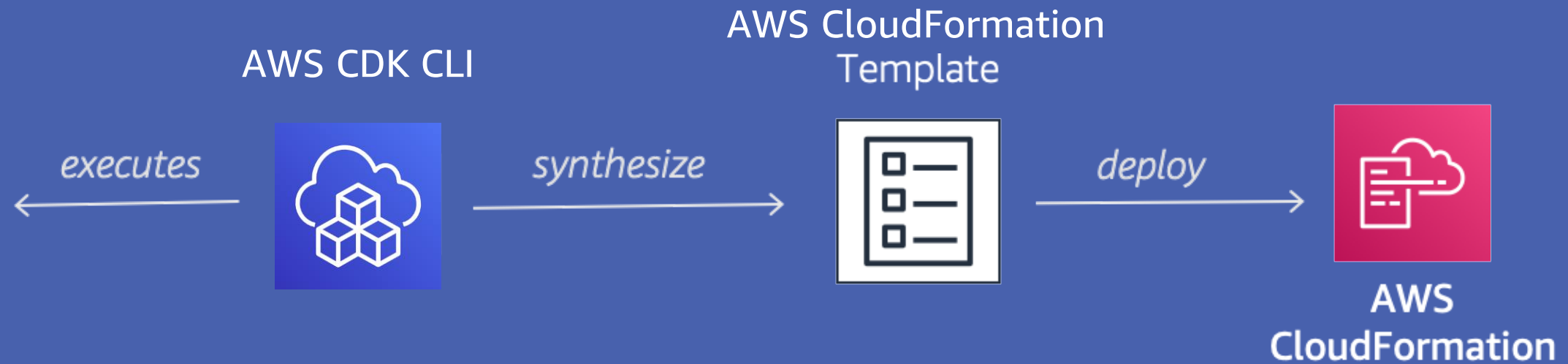
# Useful commands
* `npm run build`  compile typescript to js
* `npm run watch` watch for changes and compile
* `cdk deploy`    deploy this stack to your default AWS account/region
* `cdk diff`     compare deployed stack with current state
* `cdk synth`    emits the synthesized CloudFormation template

~/Projects/hello-cdk master* 33s
>
```

AWS CDK



"source"



"compiler"

"assembly language"

"processor"

Meet AWS SAM

AWS SAM CLI and local testing

Native AWS CloudFormation transform

Owned by AWS Lambda service team

AWS SAM CLI for deployment and local testing



Demo

Demo

Point your browser to bit.ly/SVS327

Related breakouts

OPN315-R – Building Amazon EKS clusters with the AWS Cloud Development Kit

ARC406-R – Building multi-region microservices

DOP340-R – Debugging serverless applications

API316-R – Building serverless workflows using AWS Step Functions

OPN314 – Hosting resilient static sites using open-source tools

WIN303 – Deploy modern apps with the AWS Cloud Development Kit for .NET Core

WIN310 – Infrastructure as .NET with the AWS CDK

Next steps

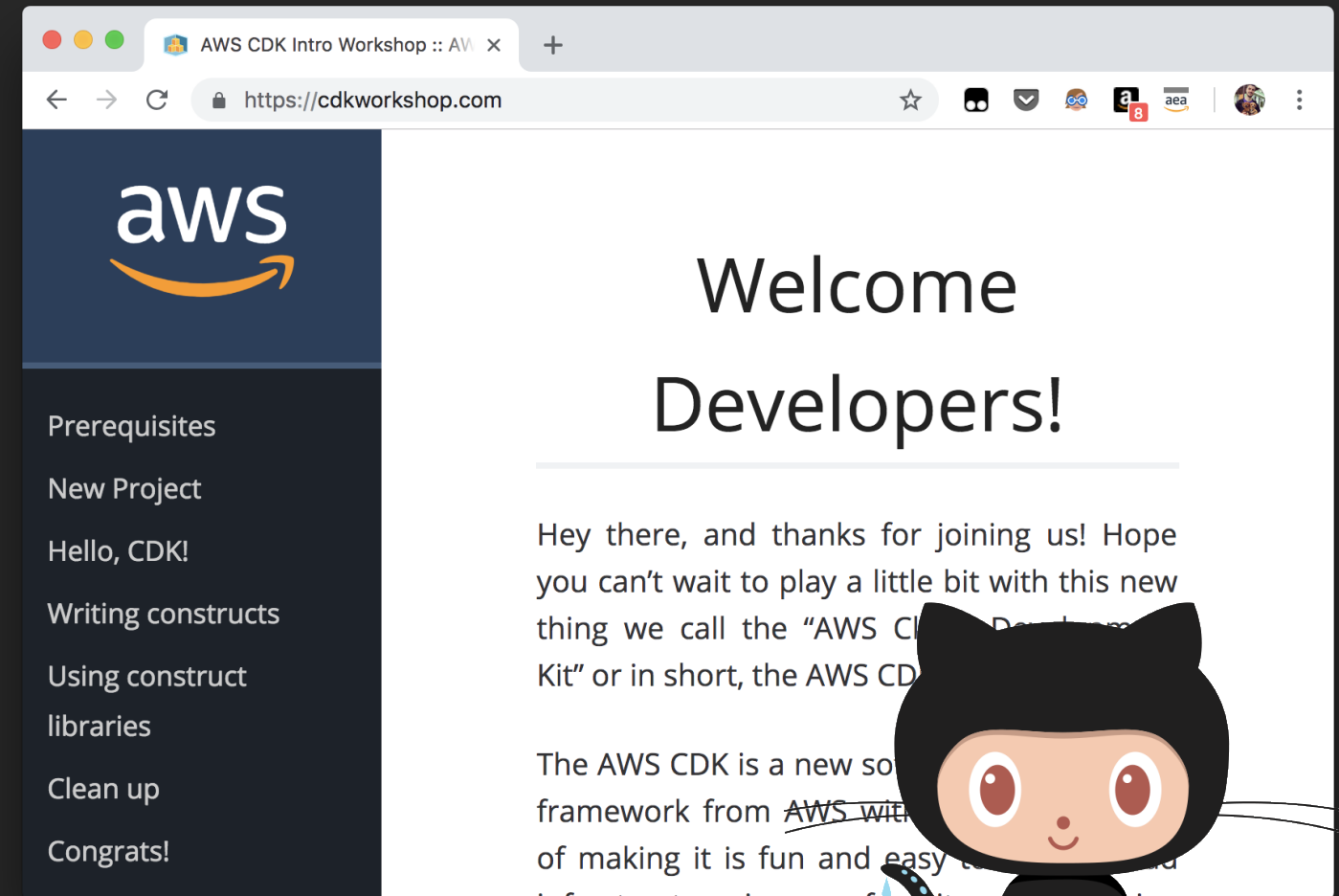
Get started with AWS SAM CLI

<https://github.com/aws-labs/aws-sam-cli>

Get started with the AWS CDK:

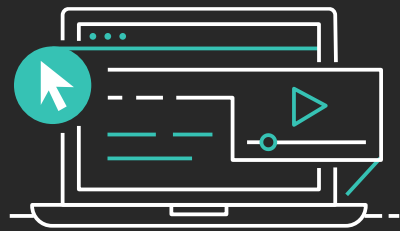
<https://cdkworkshop.com>

<https://aws.amazon.com/cdk>



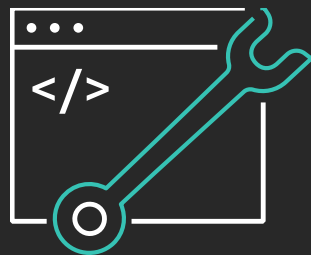
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Free, on-demand courses on serverless, including

- Introduction to Serverless Development
- Getting into the Serverless Mindset
- AWS Lambda Foundations
- Amazon API Gateway for Serverless Applications
- Amazon DynamoDB for Serverless Architectures



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Visit the Learning Library at <https://aws.training>

Thank you!

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