Getting started with infrastructure as code using Pulumi

Scott Lowe
Pulumi

Participation

- You are encouraged to follow along for hands-on experience

- Feel free to ask questions at any point along the way

- You're welcome to join the Pulumi Community Slack at https://slack.pulumi.com to continue your learning

- Feedback is always welcome

Pulumi

Prerequisites

- If you want to follow along, you'll need:

  - The Pulumi CLI installed (visit https://www.pulumi.com/docs/get-started/install/ for more information)

  - A free account on the Pulumi Service

  - An AWS account and a working installation of the AWS CLI

  - Node.js installed and working (we'll briefly use TypeScript)

@scott_lowe

Pulumi

Create a free Pulumi account

- Supports any language and cloud
- Offers state and secrets management
- Unlimited deployments

Sign up for free at:
bit.ly/3NqrvQP

@scott_lowe
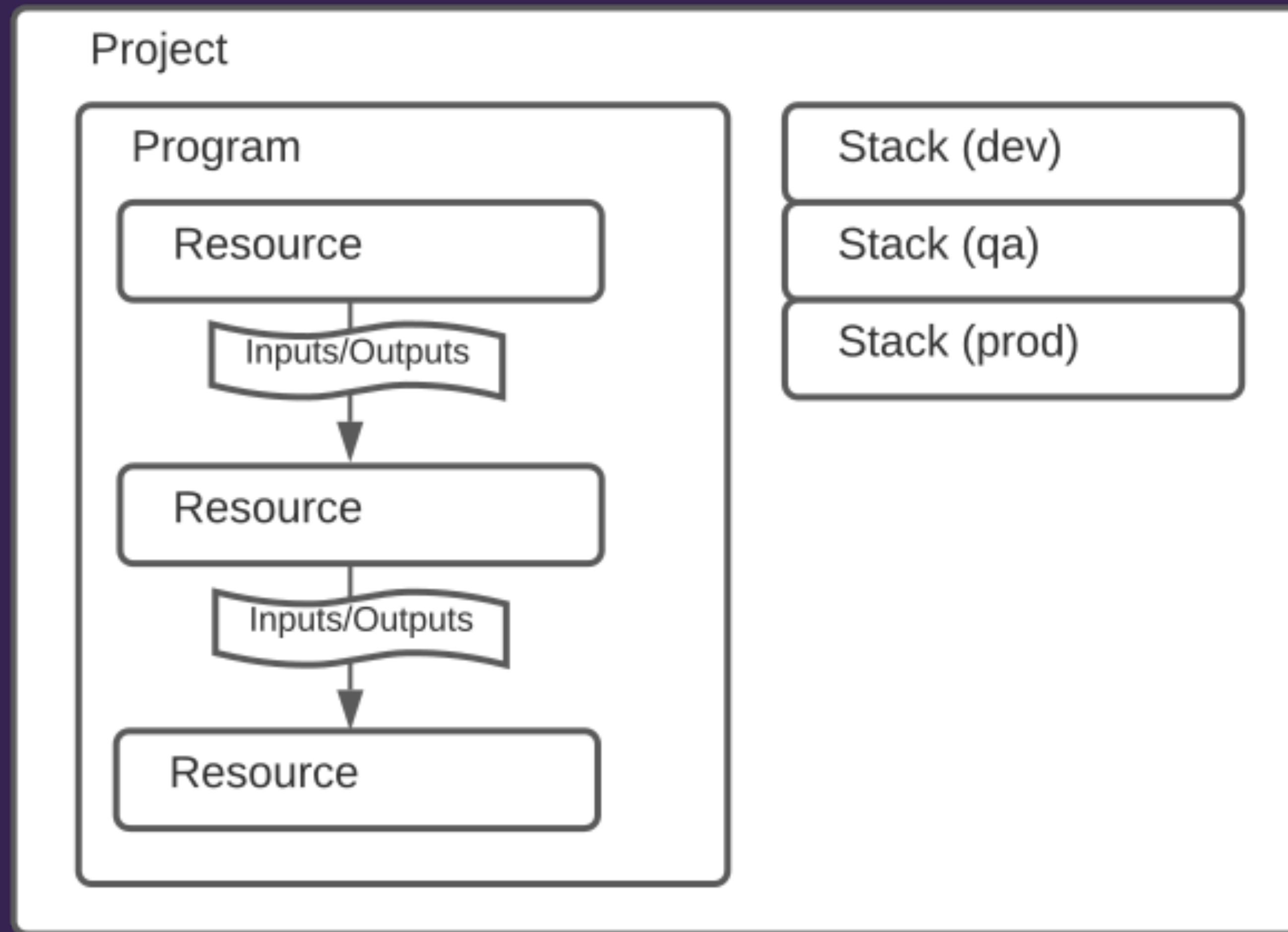
Pulumi

Why infrastructure as code?

- Enables you to produce repeatable, consistent deployments of infrastructure

- When used in conjunction with version control, makes it possible to easily see who changed what part of your infrastructure

- Serves as a form of documentation (doesn't replace good documentation, though!)

- Simplifies team collaboration (through code reviews, shared repositories, etc.)

@scott_lowe

Pulumi

Why Pulumi for IaC?

- Broad ecosystem of platforms and providers supported

- Lots of languages natively supported (JavaScript/TypeScript, C#/F#/VB.NET, Python, Golang, YAML, Java/Scala/Kotlin in preview)

- Learning a supported programming language (if you don't already know one) is an investment in a reusable skill

- Offers a great authoring experience (can use a variety of code editors or IDEs that offer syntax highlighting, code completion, linting, static analysis)

@scott_lowe

Pulumi

Ready? Let's create our first Pulumi project.

Pulumi

Pulumi's model and some terminology

- Template
- Project
- Program
- Resource
- Input/Output
- Stack

Now back to our project…

@scott_lowe

Pulumi

Convert YAML to any other language

- Pulumi can convert YAML documents to programs in another language

- The newly-converted program can "pick up" infrastructure created by a YAML document in-place (no migration needed)

- This is really helpful in getting more fluent with a programming language

@scott_lowe

Pulumi

Additional resources

- See more Pulumi architecture templates

    - https://www.pulumi.com/templates

- See the code for all the Pulumi templates

    - https://www.github.com/pulumi/templates

- Review examples of how to use Pulumi

    - https://www.github.com/pulumi/examples

Pulumi

Thank you

Get started at https://www.pulumi.com

@PulumiCorp   slack.pulumi.com   PulumiTV   GitHub.com/pulumi