

Getting Started with Pulumi

Your First Pulumi Project



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What is Pulumi?

Infrastructure-as-code (IaC)

- **Text-based**
- **No manual configuration**
- **No configuring hardware**

Maintain complex infrastructure

Eliminate manual effort



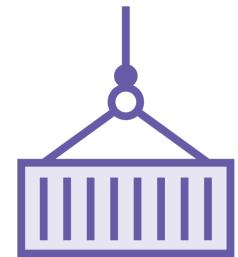
Manage a Wide Variety of Resources



Cloud resources



Databases



Containerization



Over thirty providers



No vendor lock-in



Familiar Programming Languages

C#

Python

Javascript

TypeScript

Go



Use Familiar Programming Languages

IDEs

Techniques

Best practices

Third-party libraries

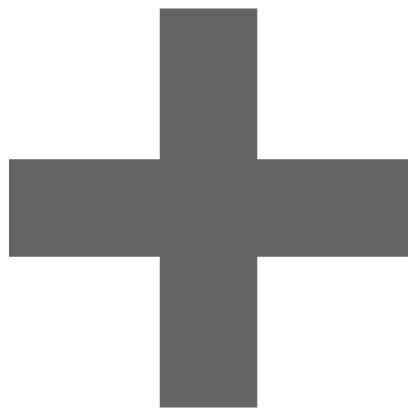




**Wide variety of
resources**



**Wide variety of
resources**

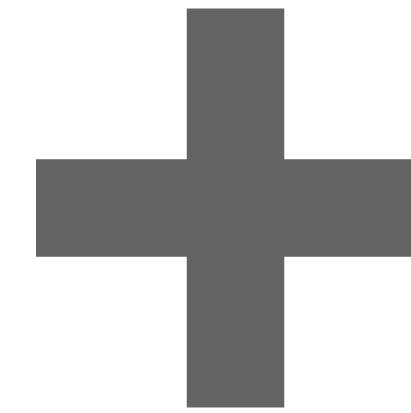


**Familiar
programming
languages**



Pulumi's Powerful Combination

**Wide variety of
resources**



**Familiar
programming
languages**



Demo



First Pulumi Program

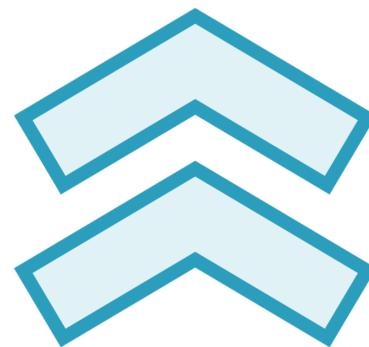


We Just Saw...



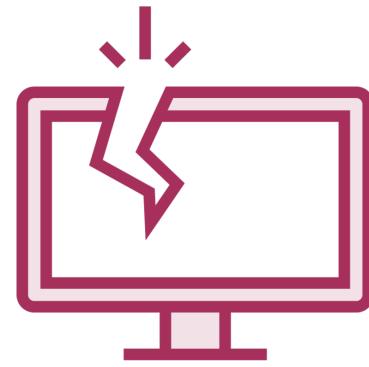
Installing Pulumi

- Instructions at pulumi.com



Using “pulumi up”

- Deploy infrastructure



Using “pulumi destroy”

- Destroy pulumi-managed infrastructure



Declarative Infrastructure

Declarative:

Define the desired state

Imperative:

Specify steps to follow



Declarative Versus Imperative



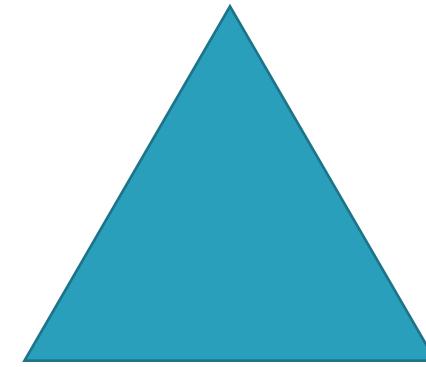
Declarative Versus Imperative

Pulumi program

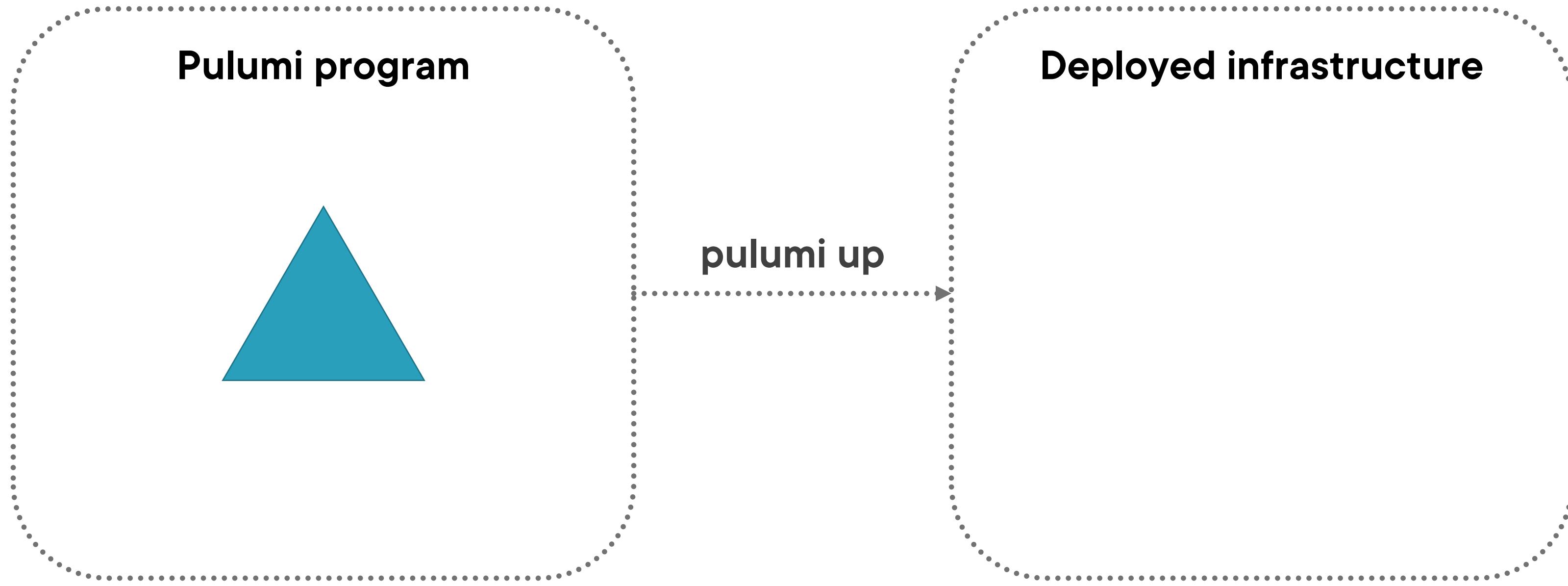


Declarative Versus Imperative

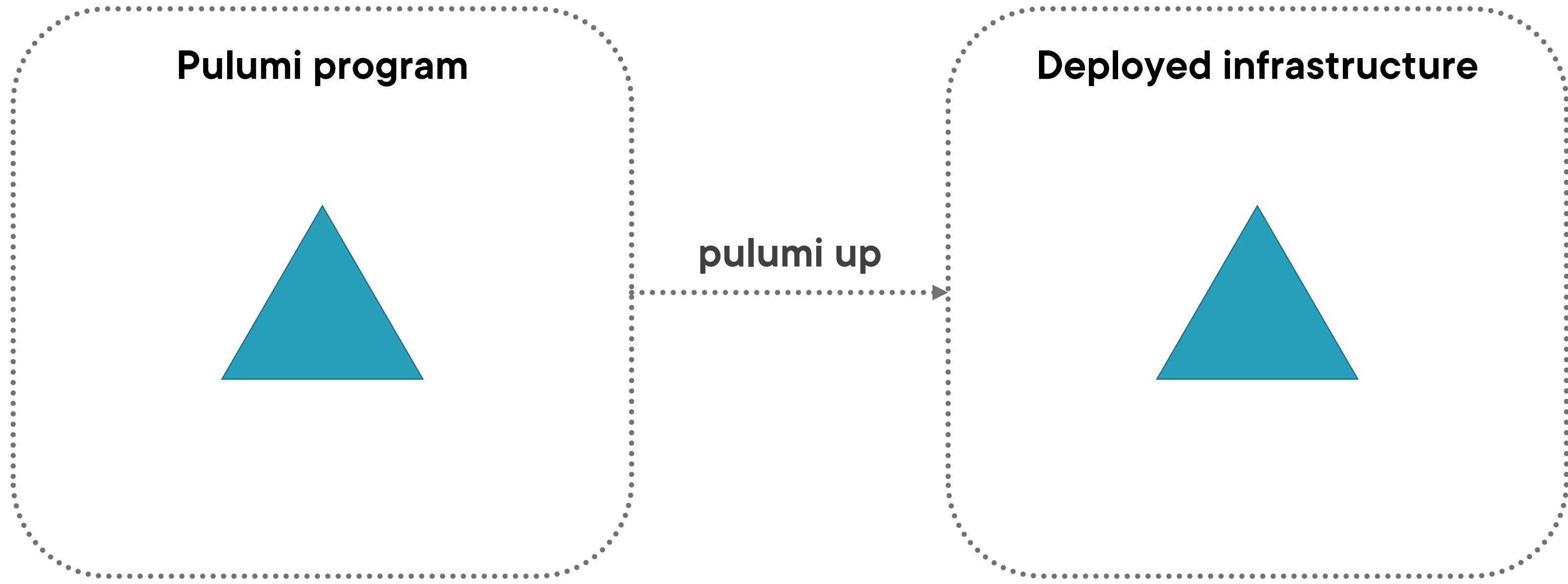
Pulumi program



Declarative Versus Imperative



Declarative Versus Imperative



Declarative Versus Imperative

Imperative Model



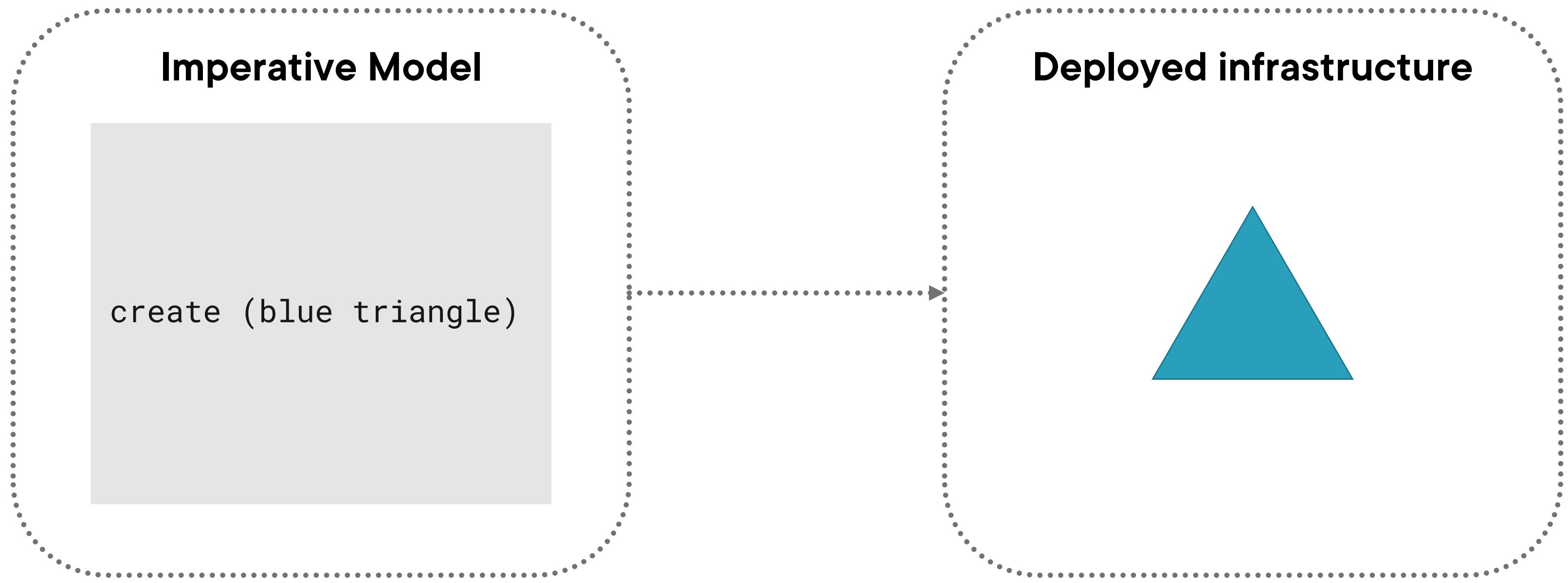
Declarative Versus Imperative

Imperative Model

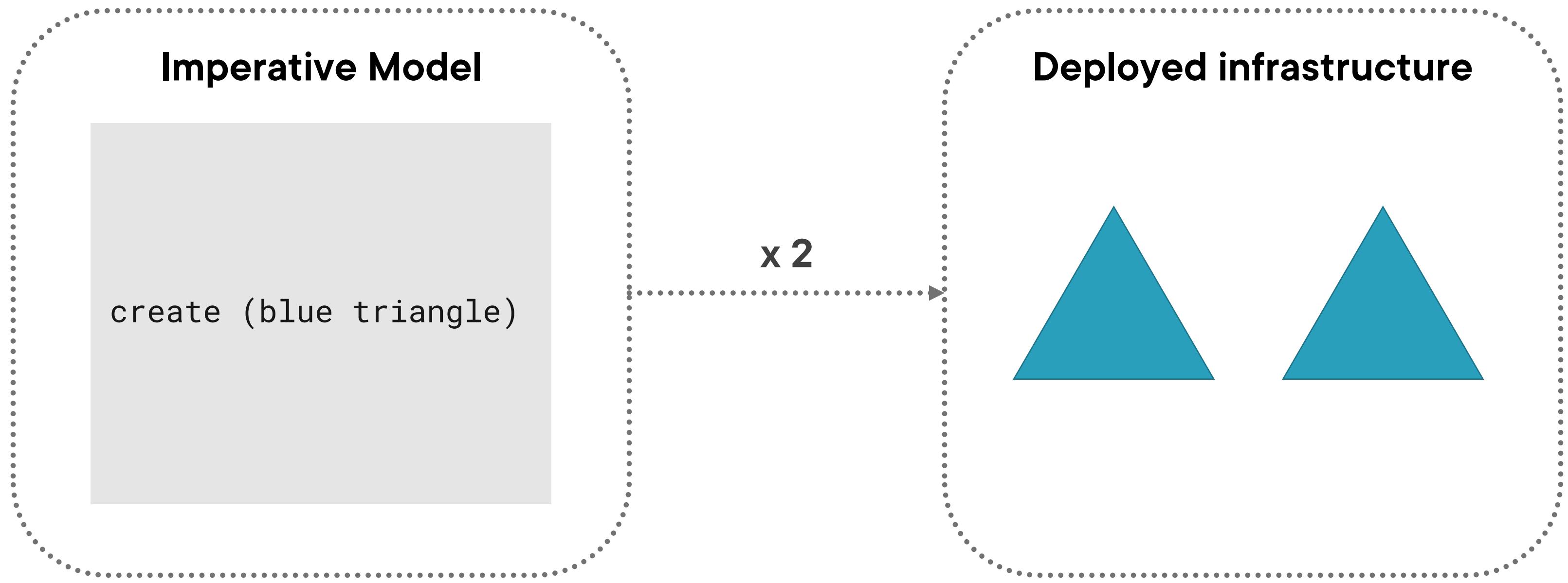
create (blue triangle)



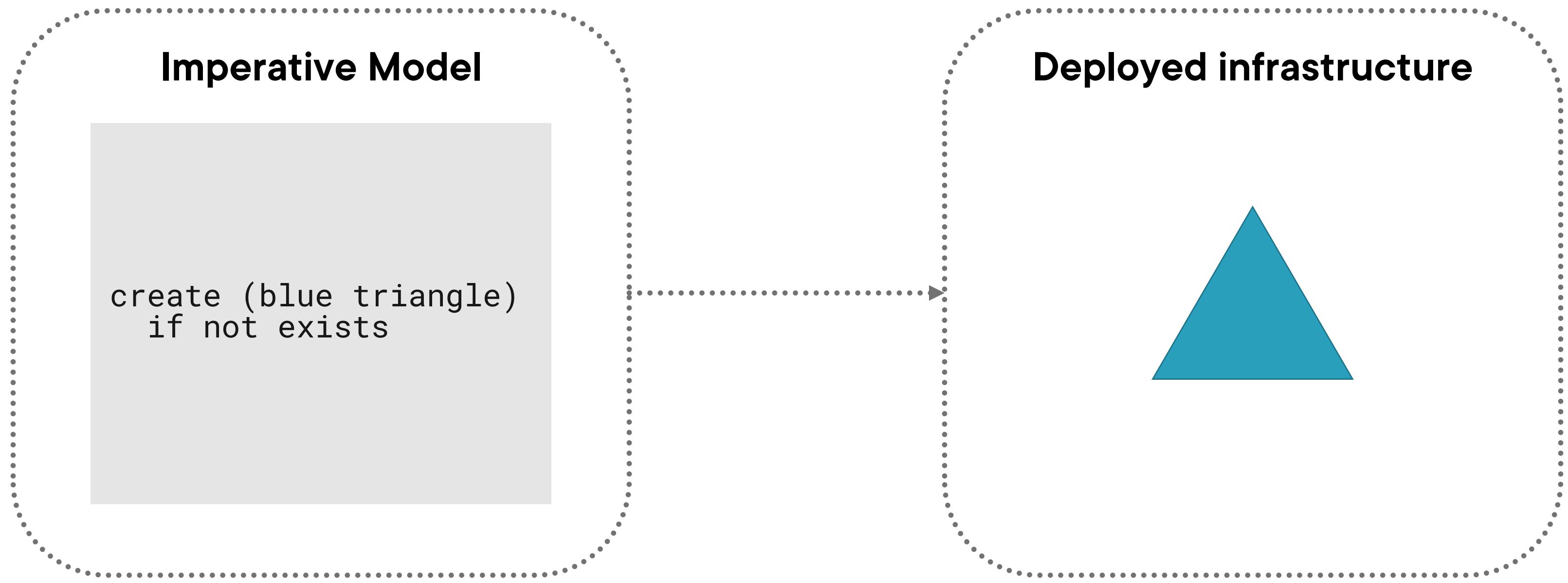
Declarative Versus Imperative



Declarative Versus Imperative

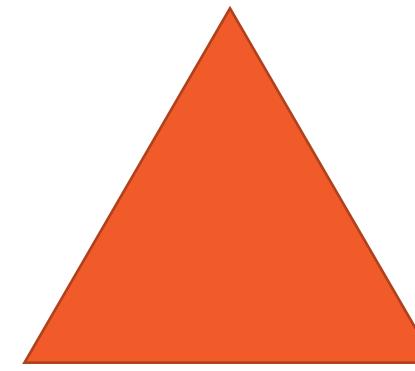


Declarative Versus Imperative

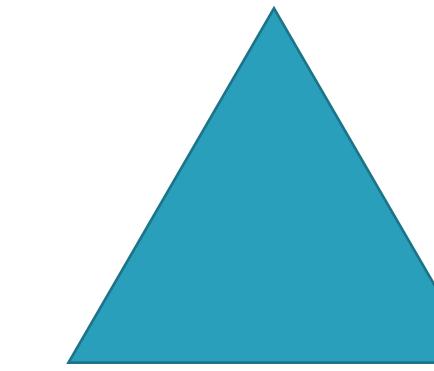


Declarative Versus Imperative

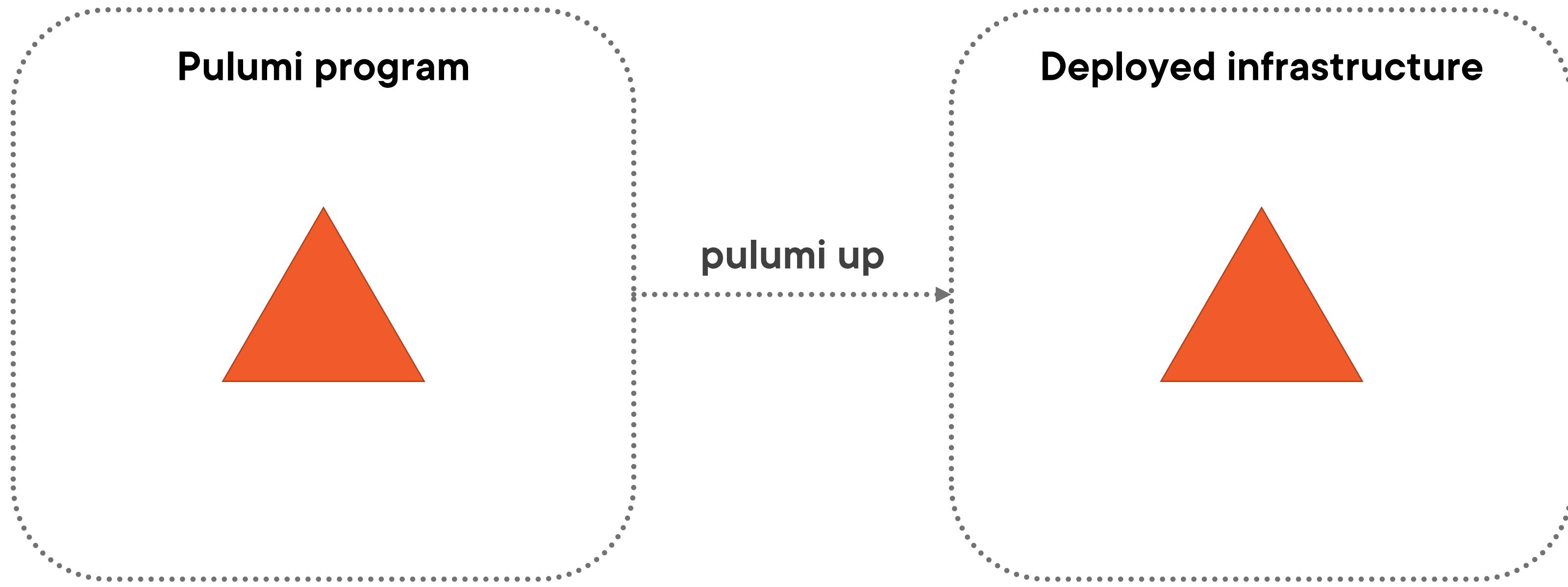
Pulumi program



Deployed infrastructure



Declarative Versus Imperative

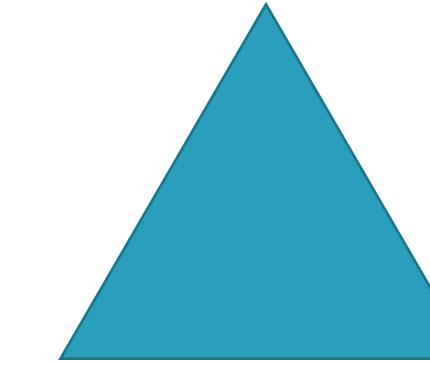


Declarative Versus Imperative

Imperative Model

```
create (orange triangle)
  if not exists
update (blue triangle)
  set color orange
```

Deployed infrastructure

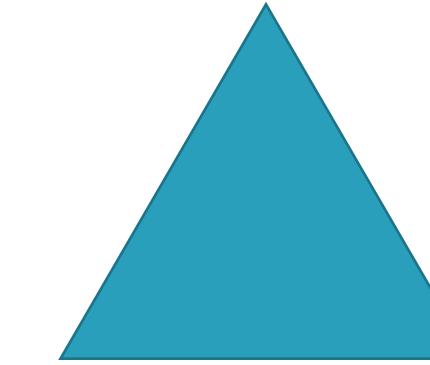


Declarative Versus Imperative

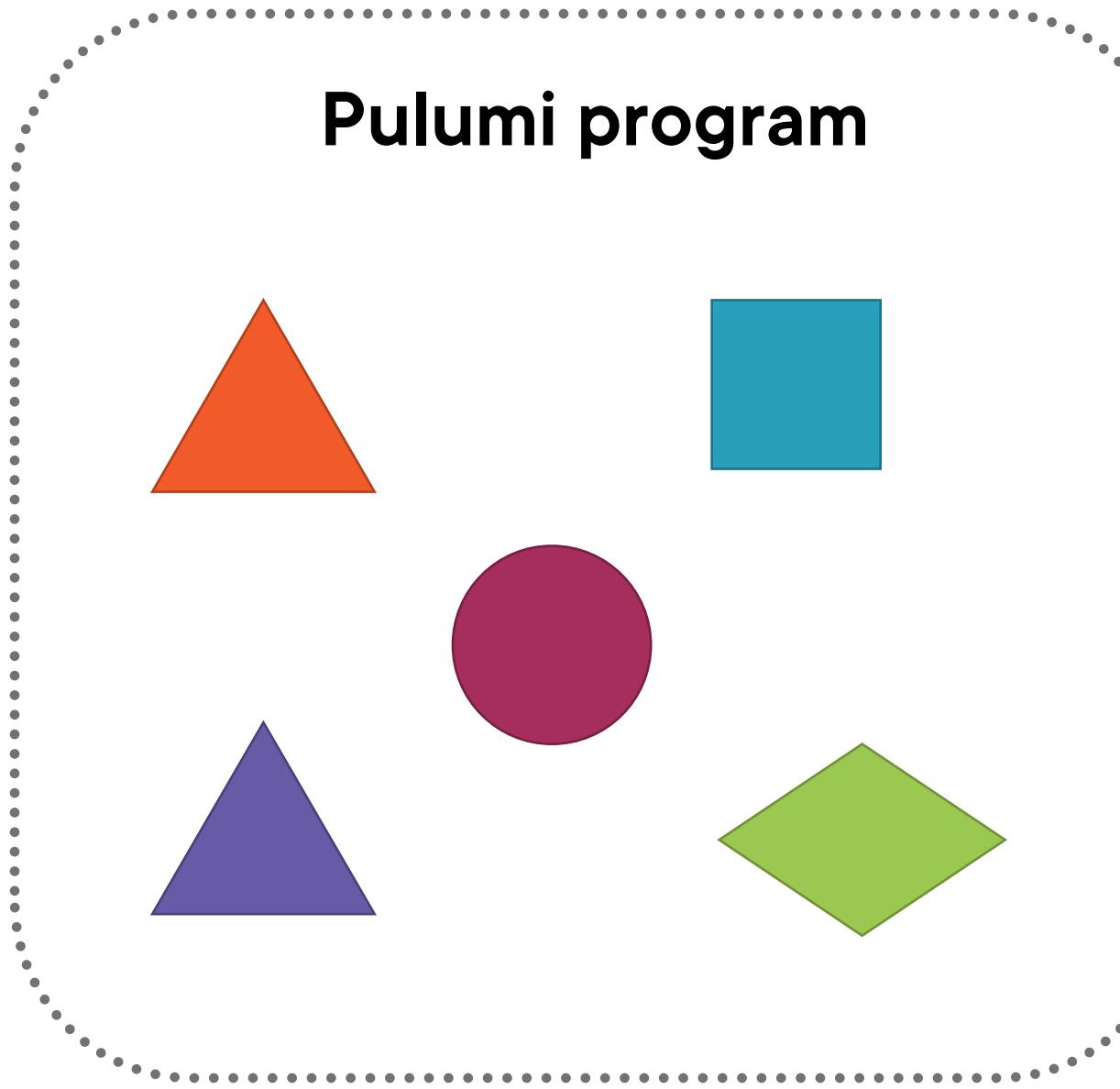
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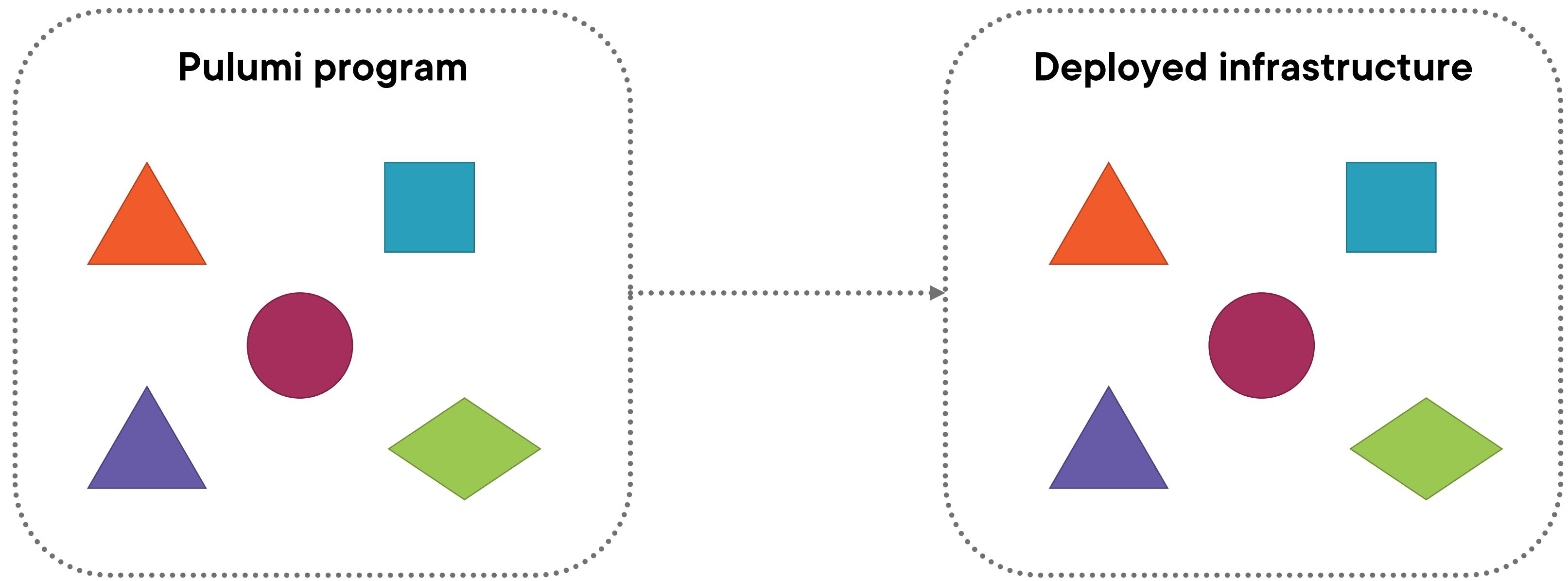
Deployed infrastructure



Declarative Versus Imperative



Declarative Versus Imperative



Demo



Declarative changes to infrastructure



Declarative infrastructure:
Define the ***what***, not the ***how***.



Demo



Pulumi's state management features





Personalized Training
and Excursions





Deploy and update infrastructure

Resources include:

- Public website frontend
- Backend endpoints
 - CORS configuration
- PostgreSQL database
- DNS configuration
- SSL certificates



Up Next: Website Frontend

