Continuous Development

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Hi, I'm Matan.

A 'Code Person' in Infra

Software Development Team Lead

Responsible for Wix devEx in Production

IDF (Mamram)   Walk Me   Wix   Today

Agenda

My local dev env

Skaffold 🤍

Skaffold & Helm

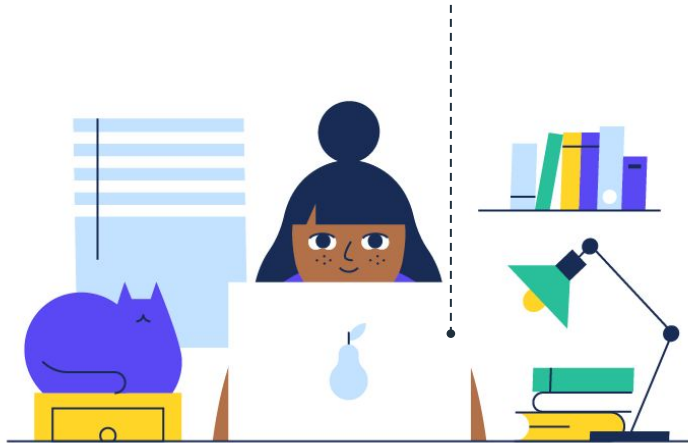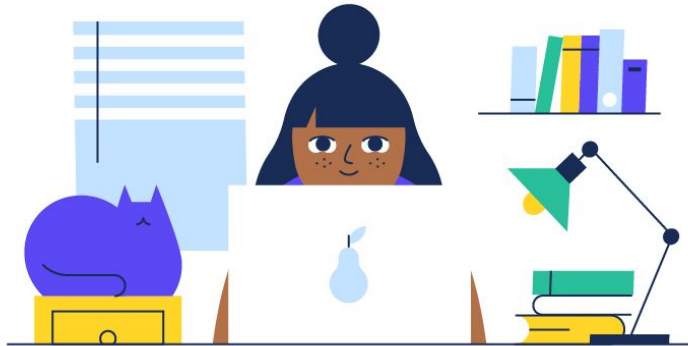Skaffold & Bazel

01 My Local Development Environment

I need:

Velocity

A good experience

Fast Feedback loop

Nothing like production
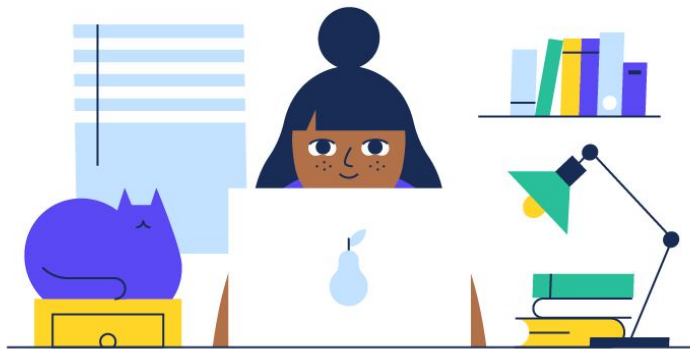
Options for running my code:

Exactly like production

Options for running
my code:

Nothing like
production

— Run your exact code/endpoints **with Tests**

— Run just **One Service**

— **Dockerized** environment

— Run **All Services**
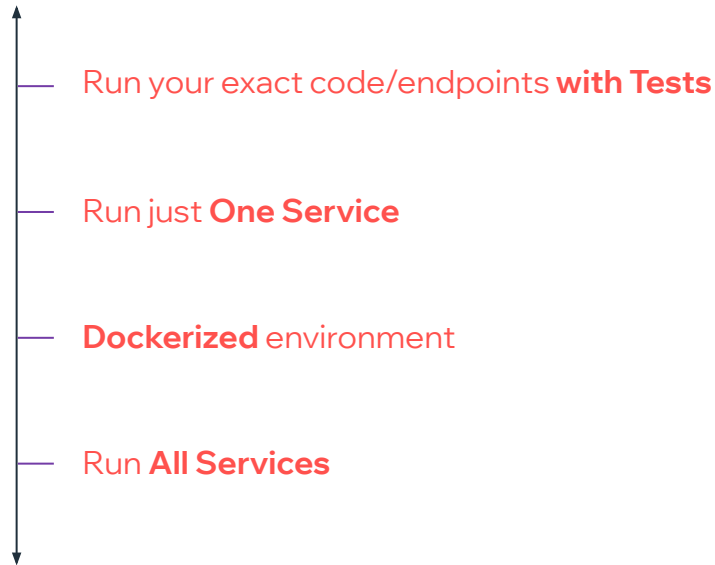
Exactly like
production

What if...

We can get here?

Velocity

A good experience

Feedback loop

Exactly like production

02 Skaffold

to Run code locally with Kubernetes.

My Go code on my branch

Skaffold

Kubernetes

Hot Rebuild

+cleanup

watch · redeploy

Skaffold

Kubernetes

Continuous Development

My Go code can run locally
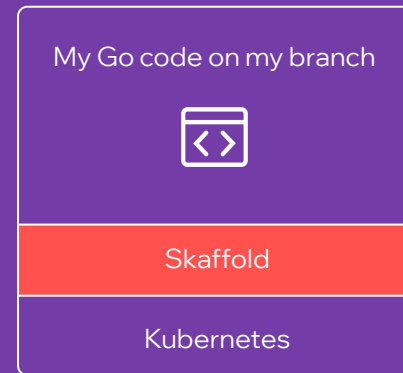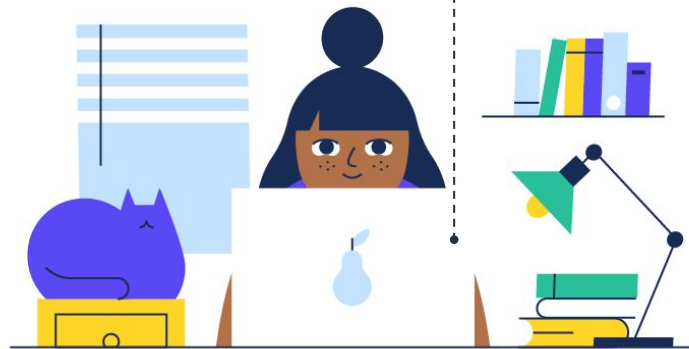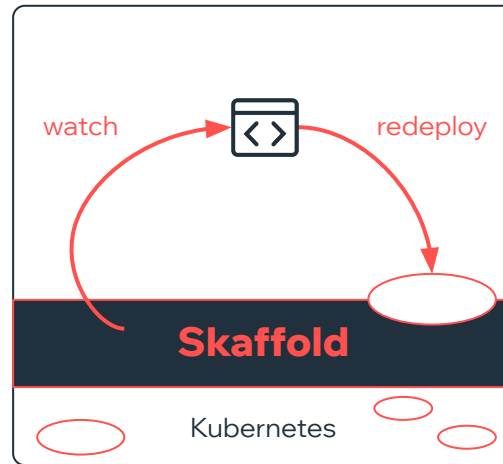
Skaffold
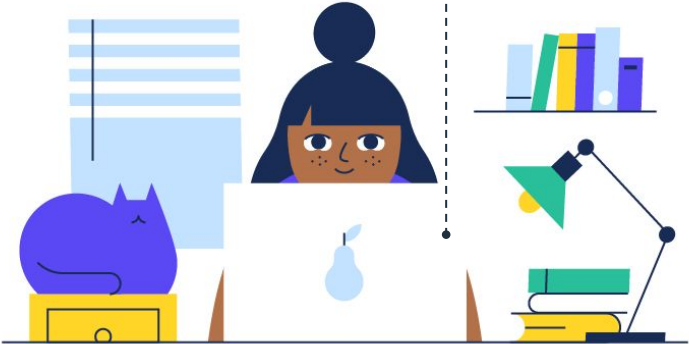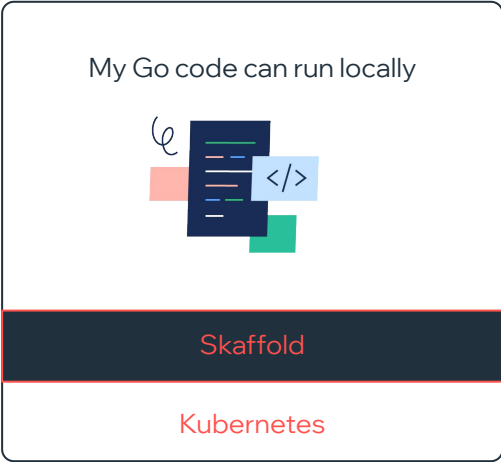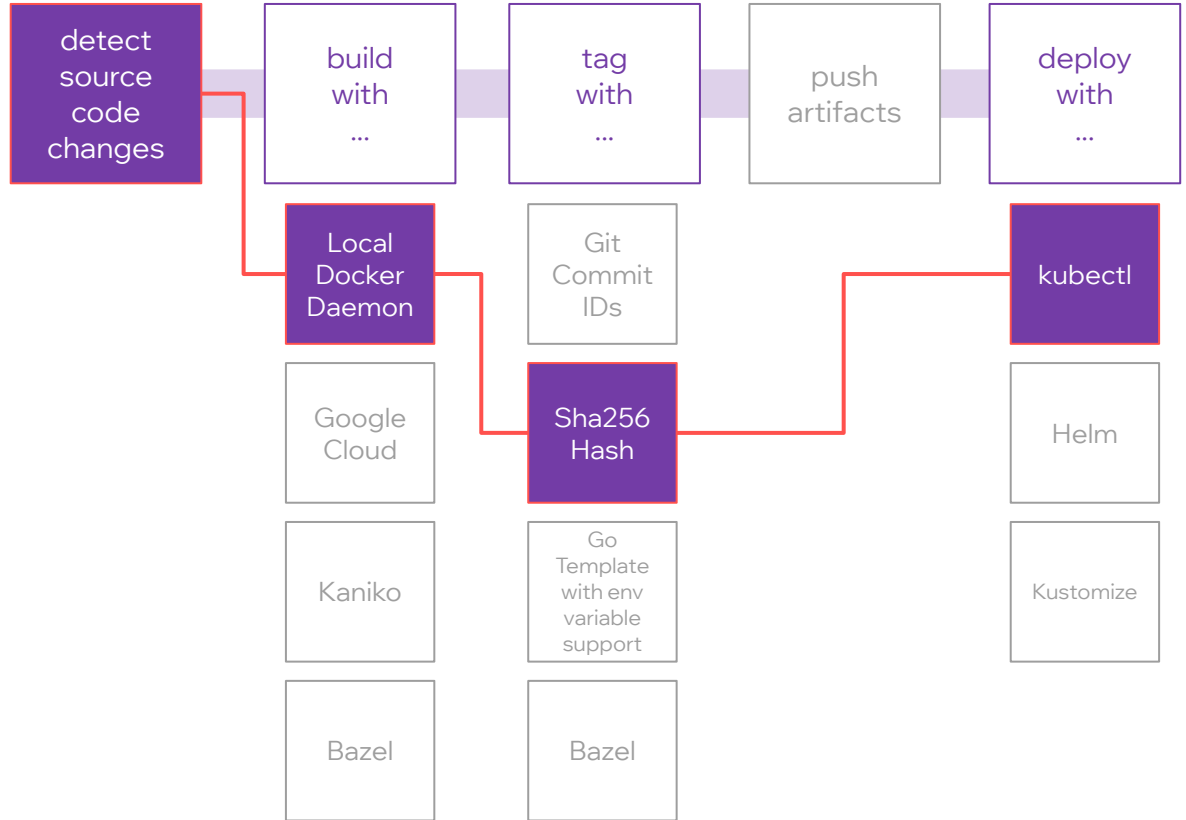
Kubernetes

Demo #1

Guestbook app pushes messages to mongoDB

Installed

1. Docker for mac

   Enable Kubernetes

2. Skaffold

   `brew install skaffold`

3. Cloud code extension in VScode/Intellij

Plug What You Need.

detect source code changes

build with ...

tag with ...

push artifacts

deploy with ...

Local Docker Daemon

Git Commit IDs

kubectl

Google Cloud

Sha256 Hash

Helm

Kaniko

Go Template with env variable support

Kustomize

Bazel

Bazel

How do you handle external dependencies?

03 Skaffold with Helm as package manager

Plug What You Need.

detect source code changes

build with ...

tag with ...

push artifacts

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Bazel
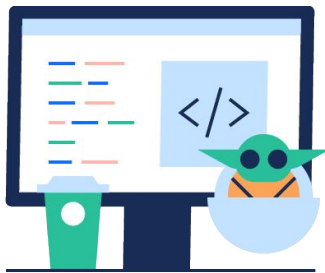
.yaml

.yaml
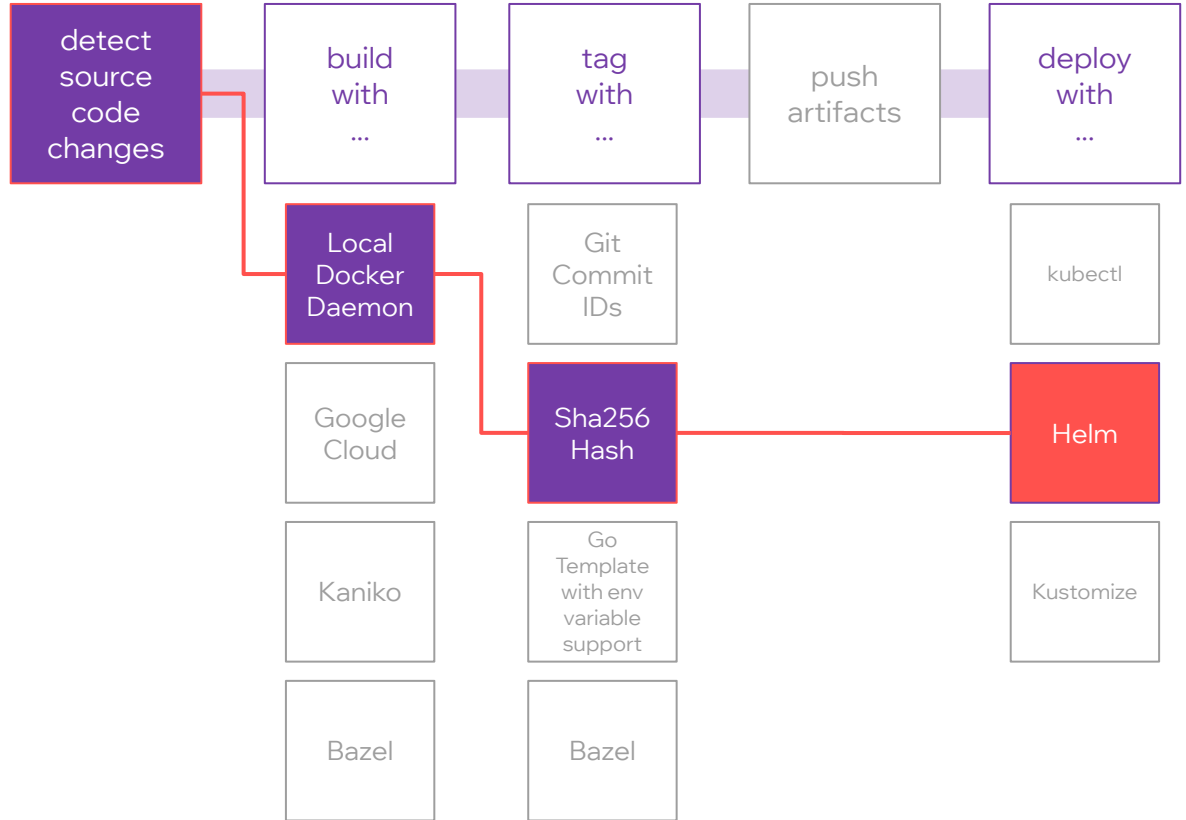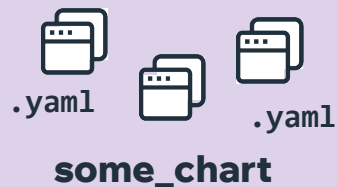
some_chart

Helm

Helm
install
some_chart

Kubernetes
Cluster

Demo #2

Installed

Helm

brew install helm

04 Skaffold with Bazel as build tool
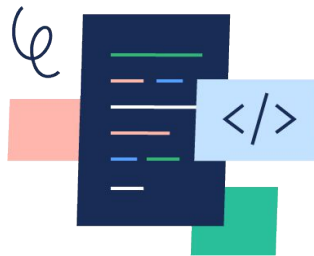
Plug What You Need.

What's Special about Bazel

A (sandboxed) single build unit in **Bazel**

sources

dependencies

settings

dependencies are in the build tree!

Deploys **ALL** You Need.

Service 1

Service 2

Sum package

Mul

Sum
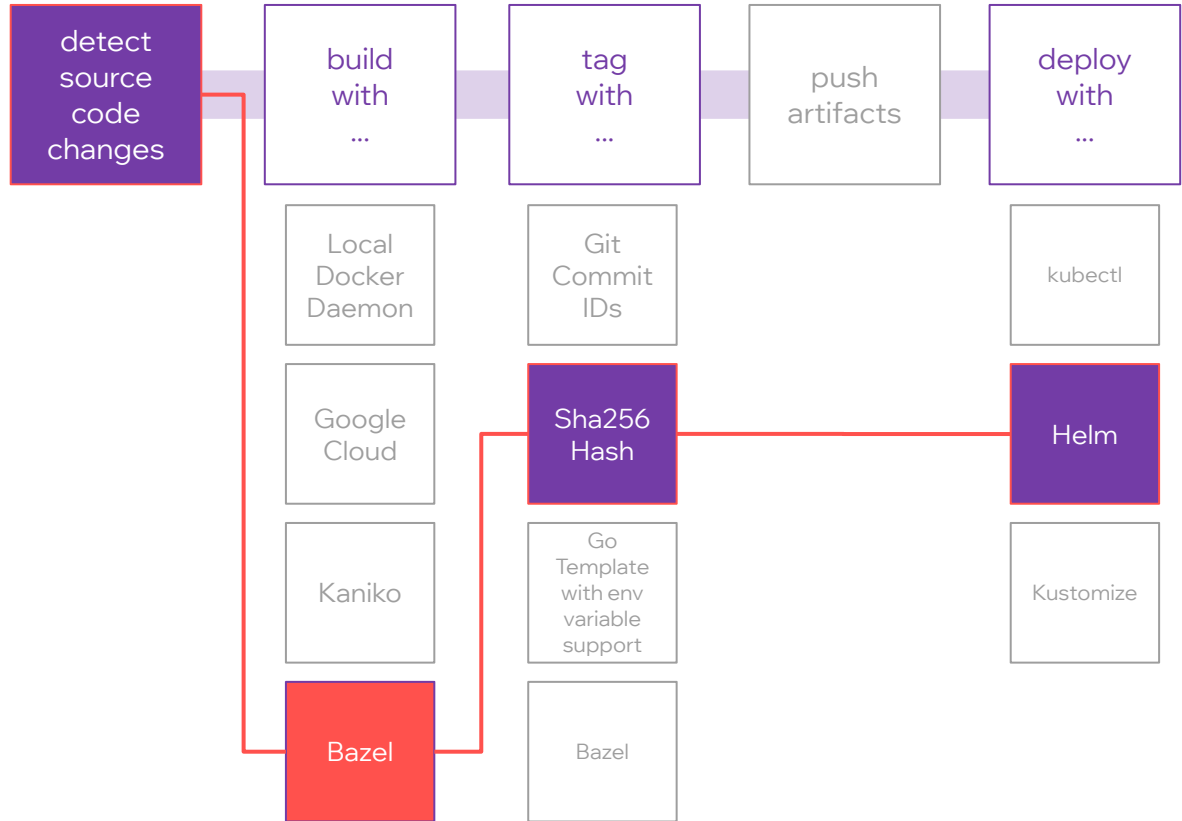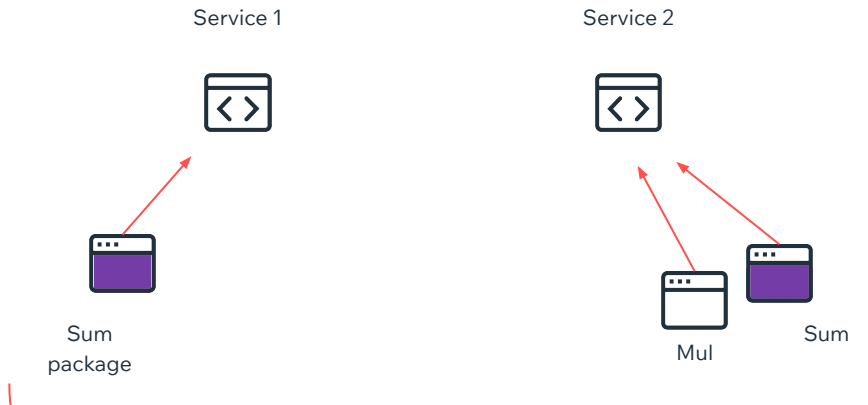
Bazel knows exactly what to deploy **including** deps

Demo **#3**

Installed

1. Skaffold

   Brew install skaffold

With Skaffold, it feels like you're writing code in production.

Velocity

A good experience

Feedback loop

QA

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Thank You!

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