Deploy and Host your app like a Pro with Cloud Build and Cloud Run

AKA: Can I please just write code

About

Matt Kaufman

- Chief Innovation Officer @ MK Partners
- Volunteer Organizer for GDG San Fernando Valley
- Volunteer Mentor for GDG Pacific Region

the1mattkaufman

Repo: http://github/the1mattkaufman/

PDF of these slides are in the repo

I built an app, now what

(

no customers +

no revenue +

no budget

)

=== Cheapest hosting I can find

Where should I host my app?

Low entry cost

Secure

Reliable

Scalable

Serverless

Well-documented

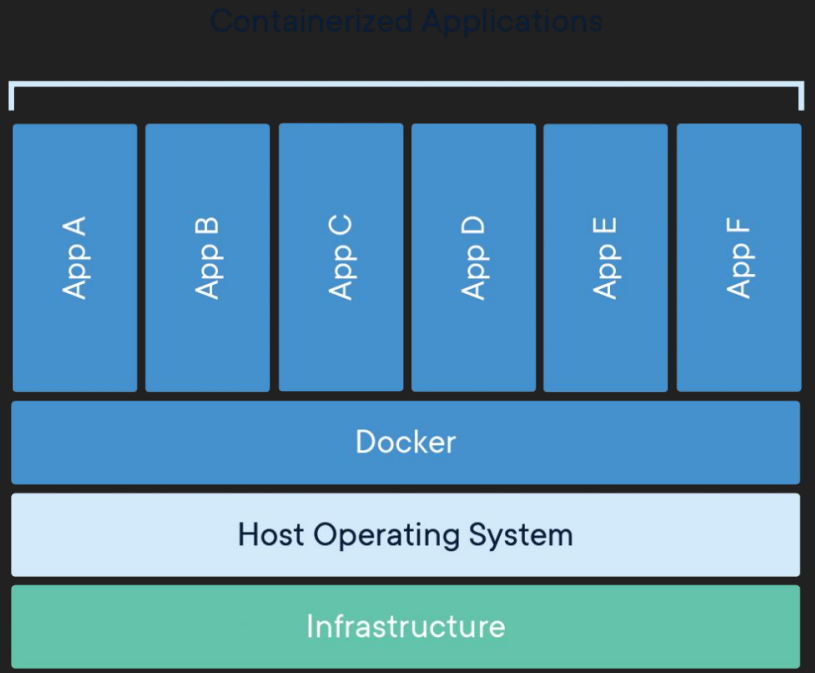
Getting started with Cloud Run

1. Create Project in Google Cloud Console
2. Enable Billing
3. Enable APIs
4. Update IAM permissions
5. Install and initialize Cloud SDK locally
6. Containerize your app
7. Build container image
8. Deploy container image to Cloud Run

Container !== ‘Scary’

A Container consists of your code and a everything required to run it.

Containers allow you to scale or migrate to new infrastructure with exact consistency



Docker Containerize your App

Dockerfile

Tells Docker Engine what to load on run

.dockerignore

Tells Docker what not to include in your container image

Let’s Build our Container Image

```
# Use Cloud Build to build the current directory as a Google Container Image
gcloud builds submit --tag gcr.io/PROJECT-ID/APP-NAME
```

```
# View the Image in the Container Registry
```

https://console.cloud.google.com/gcr/images/PROJECT-ID/GLOBAL/APP-NAME

Let’s Deploy our Image to Cloud Run

```
# Deploy an Image to Cloud Run
gcloud run deploy --image gcr.io/PROJECT-ID/APP-NAME --platform
managed

# Set Region
# Allow unauthenticated invocations to allow access to the public

# View our service running in Cloud Run
https://console.cloud.google.com/run?project=PROJECT-ID
```

But later...

How do I deploy to Cloud Run again?

Who overwrote my code?

What’s this file doing here?

Keep Developers Happy

I like writing code. I use git because it’s saved my behind multiple times and keep me and my colleagues from deleting each other's work.

Don’t make me learn how to deploy to production, and don’t yell at me when I make a mistake, and we can’t afford to hire someone dedicated to this stuff.

The Power of Cloud Build

Cloud Build does more than build container images from local directories

- It integrates with github, bitbucket, and Google Cloud Repositories
- It is aware of changes made to your repos
- It lets you define triggers based on changes
- It lets you define actions to take when a trigger is invoked
- It has a simple dashboard

Triggers

IF there is a change matching this

- Event
- Repo
- Branch

THEN

...

Build Configuration file

Steps that should be executed as part of your build process.

Can reference 3rd party libraries/packages/images

Can run tests

Can fail intentionally or due to issues

Is Cloud Run for everyone?

Containers do not retain state, so if your app needs to write to local database/storage, you will have to migrate that to a cloud-based option.

If you'd prefer to give up some control and not deal with Containers, try Firebase instead.

If you'd rather not risk your site becoming popular and getting an unexpected bill, try using the budgeting features OR just use a VM that will not scale.

Thank You

Questions & Answers