Tiny Web Apps

Google App Engine

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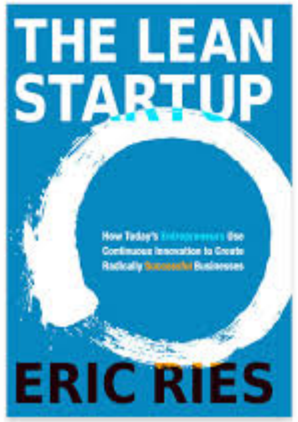
What are “tiny web apps”?

The Lean Startup by Eric Ries

“A core component of Lean Startup methodology is the build-measure-learn feedback loop. The first step is figuring out the problem that needs to be solved and then **developing a minimum viable product (MVP) to begin the process of learning as quickly as possible**. Once the MVP is established, a startup can work on tuning the engine. This will involve measurement and learning and must include actionable metrics that can demonstrate cause and effect question.”

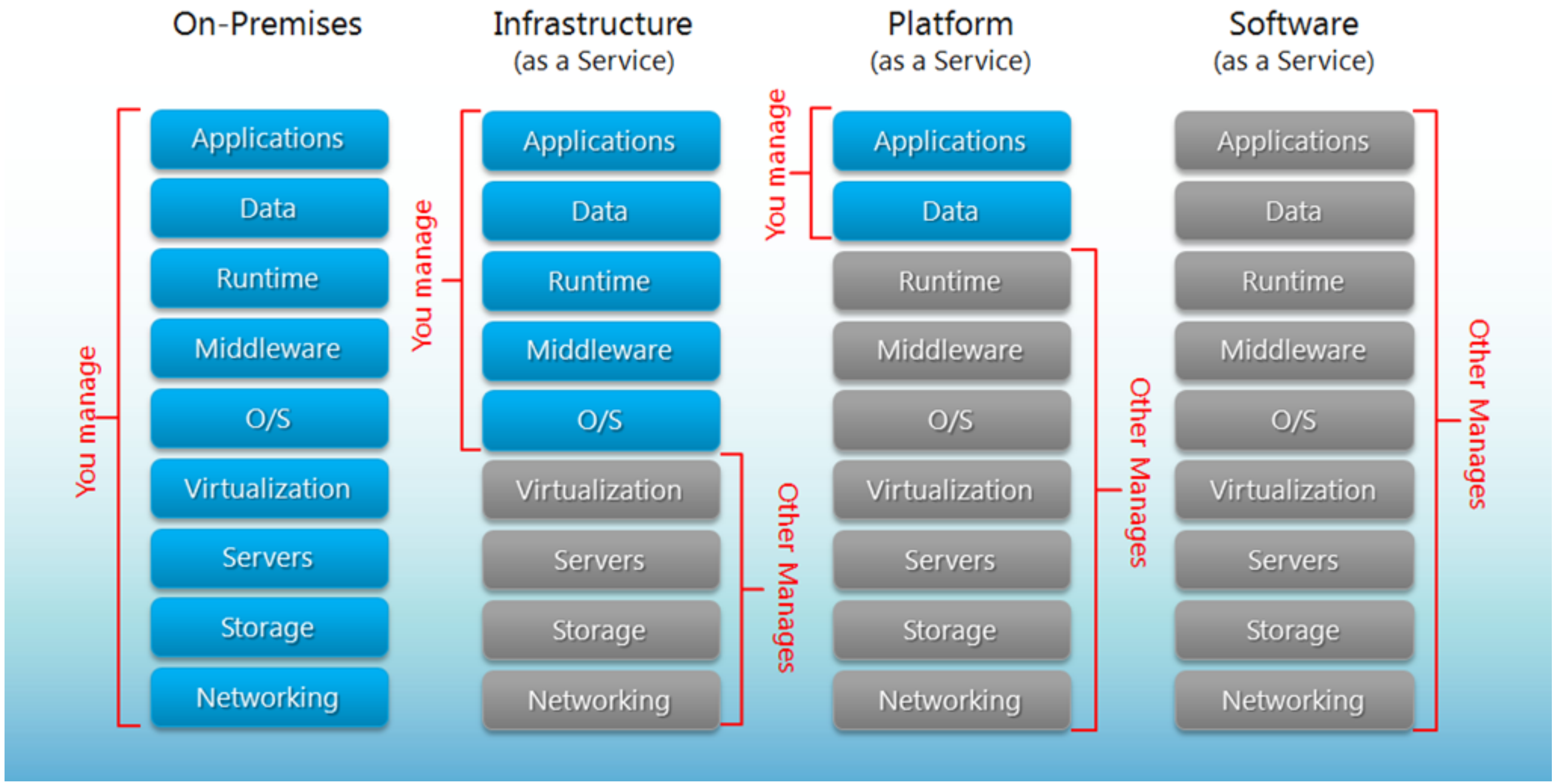

THE LEAN STARTUP
How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses
ERIC RIES

In the web world, I call this MVP a “tiny web app” or - just because it’s fun

Goals

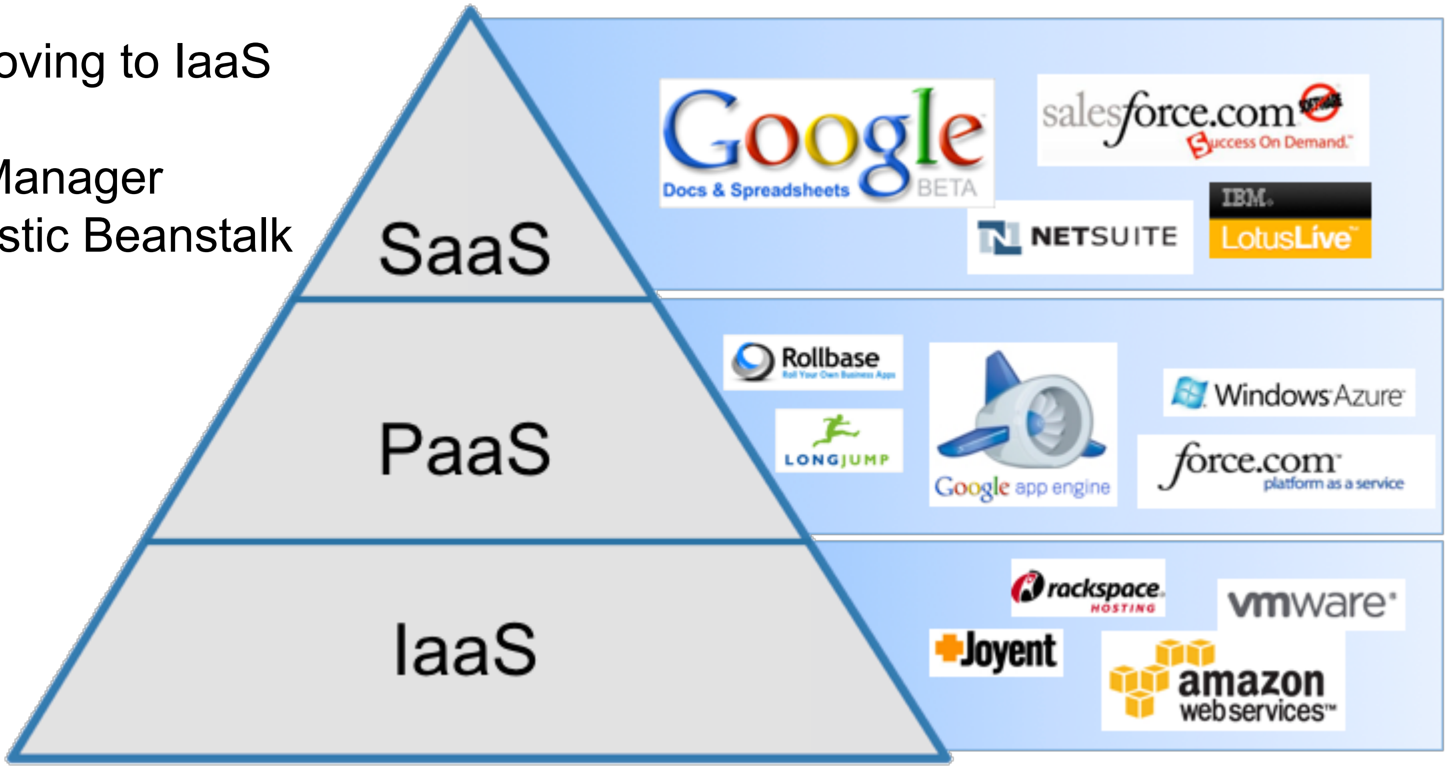
- Build something quickly
- Minimize development and hosting costs
- Minimize issues that would hinder early adoption
- Be able to scale with demand quickly

Separation of Responsibilities



*aaS?

- Google started in PaaS and is moving to IaaS
  - Google Compute Engine
  - Google Cloud Deployment Manager
- AWS has PaaS offerings like Elastic Beanstalk
- Heroku, Salesforce, Azure, etc



Google App Engine

- Fully managed platform
- Web Management Console
- Supports Python, Java, PHP, Go and has language specific SDK’s
- SDK to run local development just like production
- Command line utility to upload app to production
- Multiple storage options:
  - Cloud Datastore - NoSQL
  - Cloud SQL - fully managed MySQL database
  - Cloud Storage - object storage

Google App Engine

- Built in services:
  - Channel - bidirectional channel with client
  - Images - manipulate image data
  - Mail - send and receive
  - Memcache - explicit and automatic
  - Task Queues
  - Users - google accounts, google apps, OpenID
  - XMPP
- Scheduled tasks, DoS protection, Auto-indexing

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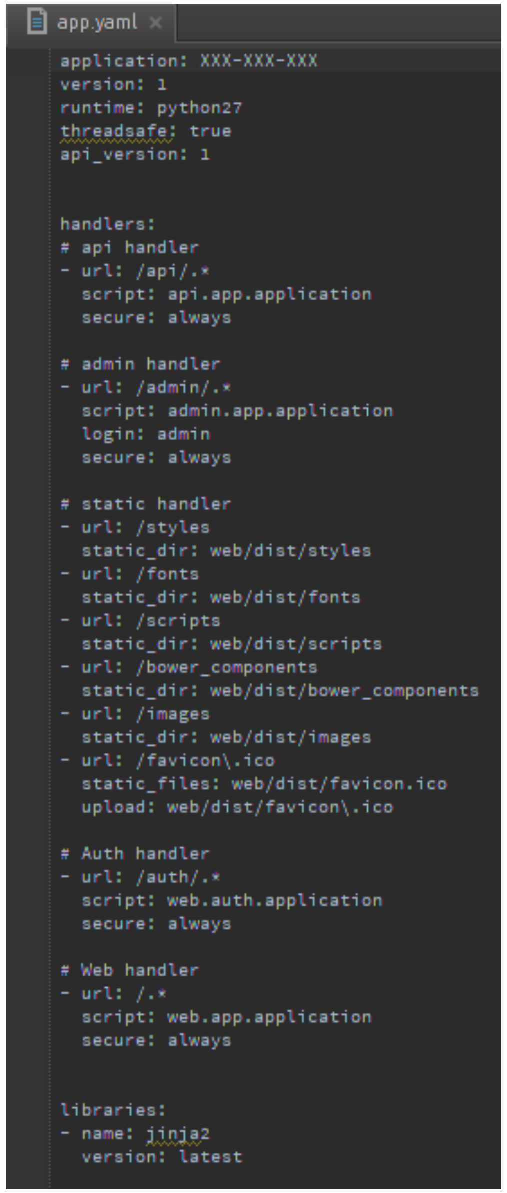
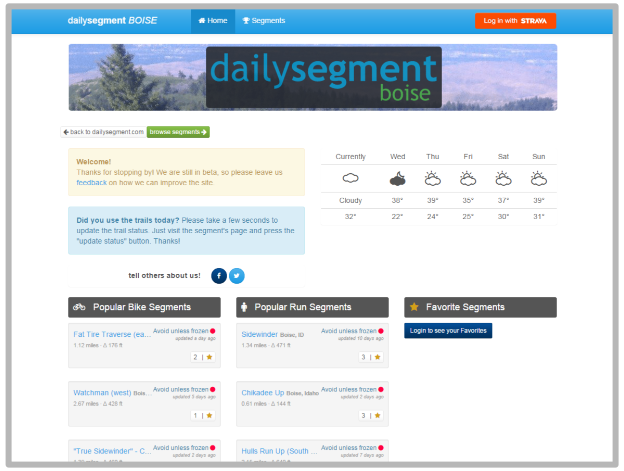

app.yaml

```
application: XXX-XXX-XXX
version: 1
runtime: python27
threadsafe: true
api_version: 1


handlers:
# api handler
- url: /api/.*
  script: api.app.application
  secure: always

# admin handler
- url: /admin/.*
  script: admin.app.application
  login: admin
  secure: always

# static handler
- url: /styles
  static_dir: web/dist/styles
- url: /fonts
  static_dir: web/dist/fonts
- url: /scripts
  static_dir: web/dist/scripts
- url: /bower_components
  static_dir: web/dist/bower_components
- url: /images
  static_dir: web/dist/images
- url: /favicon\.ico
  static_files: web/dist/favicon.ico
  upload: web/dist/favicon\.ico

# Auth handler
- url: /auth/.*
  script: web.auth.application
  secure: always

# Web handler
- url: /.*
  script: web.app.application
  secure: always


libraries:
- name: jinja2
  version: latest
```



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Did you use the trails today? Please take a few seconds to update the trail status. Just visit the segment's page and press the "update status" button. Thanks!

Currently	Wed	Thu	Fri	Sat	Sun
Cloudy	38°	39°	35°	37°	39°
32°	22°	24°	25°	30°	31°

Fat Tire Traverse (ea… — Avoid unless frozen — *updated a day ago* — 1.12 miles · Δ 176 ft — 2 | ★

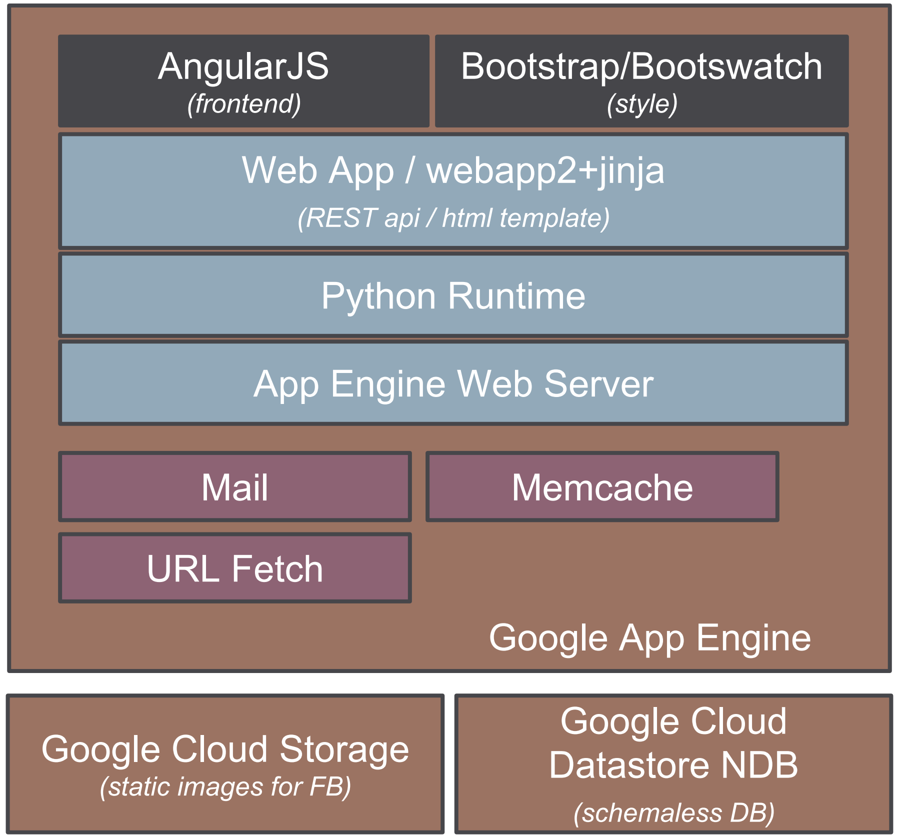
Sidewinder Boise, ID — Avoid unless frozen — *updated 10 days ago* — 1.34 miles · Δ 471 ft — 3 | ★

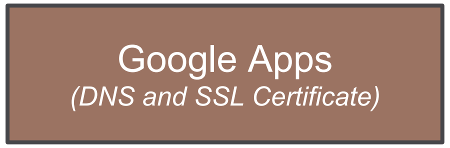
Watchman (west) Bois… — Avoid unless frozen — *updated 5 days ago* — 2.67 miles · Δ 428 ft — 1 | ★

Chikadee Up Boise, Idaho — Avoid unless frozen — *updated 2 days ago* — 0.61 miles · Δ 144 ft — 3 | ★

"True Sidewinder" - C… — Avoid unless frozen — *updated 2 days ago*

Hulls Run Up (South … — Avoid unless frozen — *updated 7 days ago*





Demo

- Simple Python Web App
    - Angular js/css served statically out of app
    - Bootstrap “self” with template & grunt-replace-string
- Leverages GAE User, Email, Memcache, NDB services

https://github.com/mattmessinger/boise-angularjs-gae-demo