

A person is sitting in a server room, working on a laptop. The room is filled with rows of server racks. The person is wearing a dark sweater and glasses. The background is slightly blurred, focusing on the person and the text.

10 SURPRISING TRICKS PROFESSIONAL DEVOPS
DON'T WANT YOU TO KNOW!

**WHY YOUR RAILS APP ISN'T
“PRODUCTION READY”**

WHO AM I?

- ▶ Undergrad and graduate degree in Software Engineering
- ▶ At Table XI for 8 years
- ▶ Developer, Devops, Project Manager, Client Principal, Partner
- ▶ Never served in the military, but thank you for your service



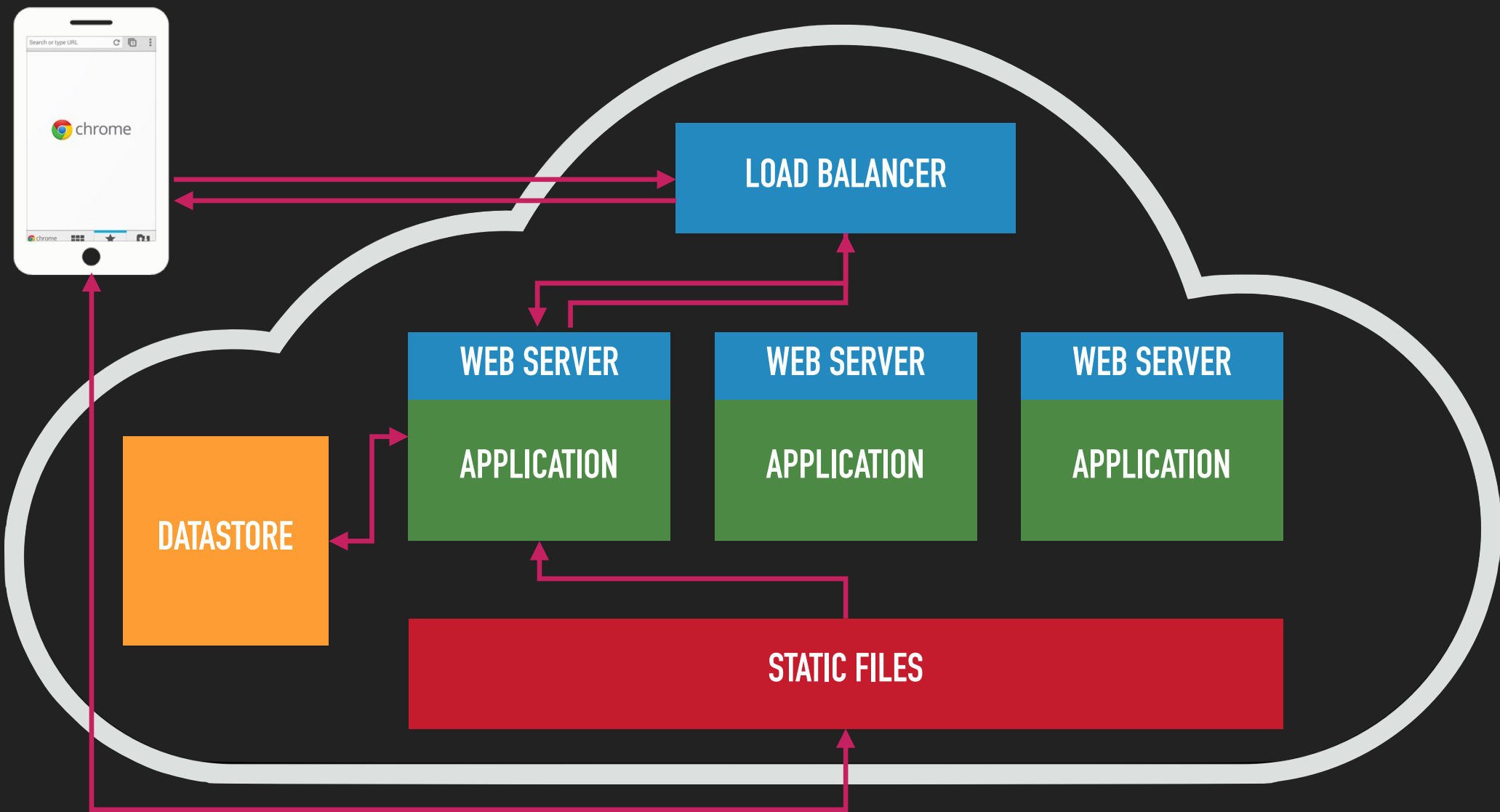
FROM YOUR LAPTOP TO THE CLOUD

TYPICAL ARCHITECTURE





There is no cloud
it's just someone else's computer





LOAD BALANCER

Elastic Load Balancer

WEB SERVER

APPLICATION

EC2 Instance

WEB SERVER

APPLICATION

EC2 Instance

WEB SERVER

APPLICATION

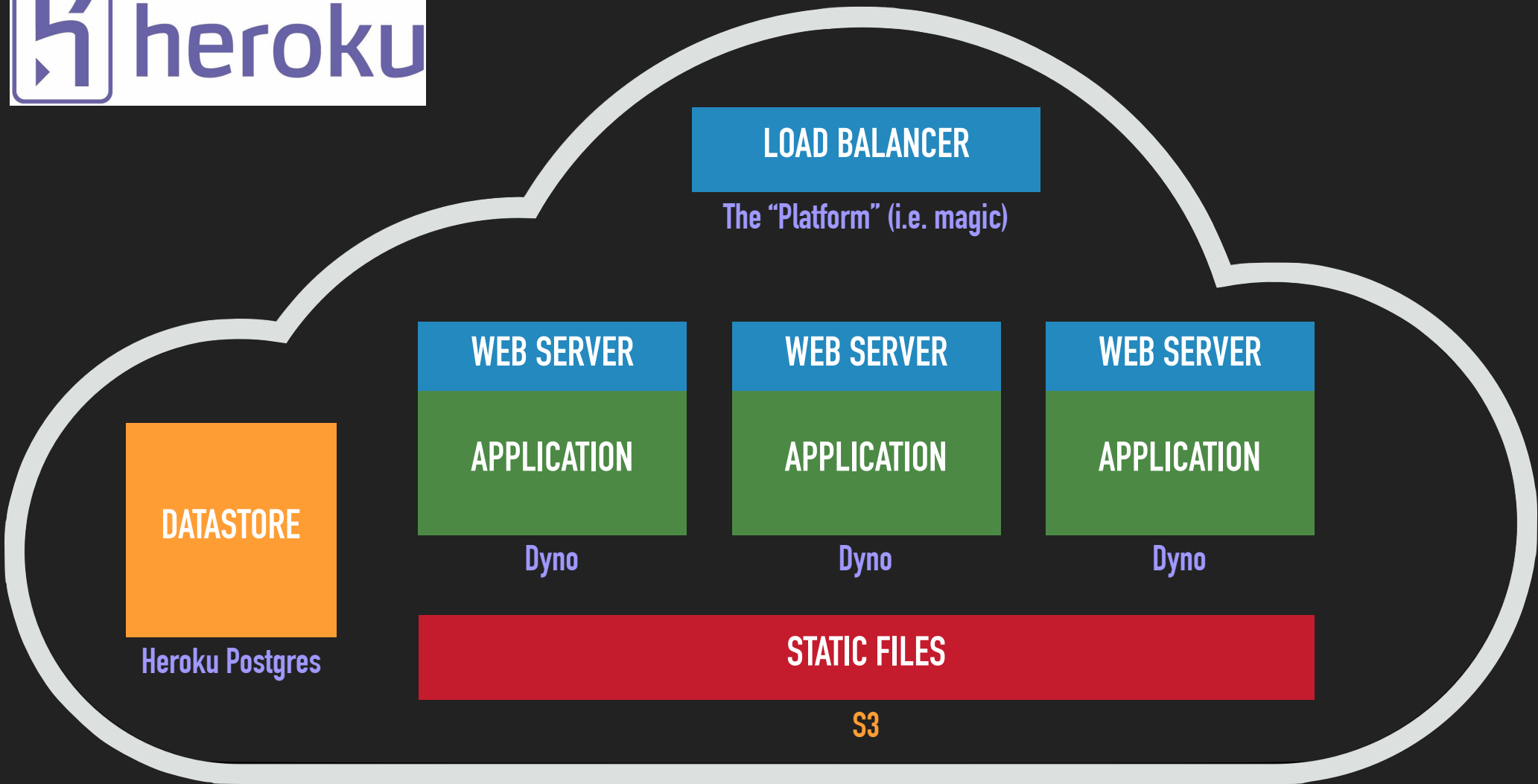
EC2 Instance

DATASTORE

Relational Database
Service (RDS)

STATIC FILES

S3



LOAD BALANCER

The "Platform" (i.e. magic)

WEB SERVER

APPLICATION

Dyna

WEB SERVER

APPLICATION

Dyna

WEB SERVER

APPLICATION

Dyna

DATASTORE

Heroku Postgres

STATIC FILES

S3

SETTING UP A HEROKU OR AWS ACCOUNT

1. Enter payment information
2. Purchase a domain name
3. Spin up services
4. Manage domain name servers (DNS)



I SET UP MY CLOUD
ACCOUNT. I'M DONE,
RIGHT?





NO!

YOUR APP ISN'T UPLOADED

- ▶ Heroku: Use the Heroku toolset
- ▶ AWS: Capistrano gem + (Passenger or Unicorn gem)



YOUR APP ISN'T SECURE

- ▶ HTTPS keeps things private
- ▶ HTTPS is SEO friendly
- ▶ Purchase a SSL certificate



YOUR APP CAN'T SEND EMAIL

- ▶ Cloud hosts restrict outbound email
- ▶ Even if your host doesn't, your email could still be "suspicious"
- ▶ SMTP through email provider: Google Apps, Office 365, Zoho
- ▶ Dedicated email sending: Sendgrid, Amazon SES

YOUR APP CAN'T SEND FILES

- ▶ Application servers are "disposable"; your uploaded files are not
- ▶ Multiple servers require shared storage
- ▶ Store files using Paperclip or Carrierwave or Dragonfly gem and Amazon S3



MY APP IS SECURE, I
CAN SEND EMAILS, AND
SERVE FILES. I'M
DONE, RIGHT?



YES, BUT...

YOUR APP STYLESHEETS AND JAVASCRIPT AREN'T LOADING

- ▶ The Asset Pipeline converts code you want to write (CoffeeScript, SASS) to something a browser can read (CSS, JS)
- ▶ Assets are compiled on the fly in dev, but not in production
- ▶ It's easy to forget to include assets in precompilation or reference assets incorrectly

YOUR APP ERROR PAGES ARE UGLY

- ▶ Unfortunately, your users WILL experience 500 and 404 error, so style them
- ▶ Rescue known errors and show helpful error page

YOUR APP BREAKS WHEN OTHER SERVICES ARE DOWN

- ▶ Most apps will rely on some third party services: SendGrid, Twilio, TaxCloud, Authorize.net); assume these services are unreliable
- ▶ Handle service errors gracefully
- ▶ Decouple services from user web requests by using background workers: Delayed Job, Sidekiq

YOUR APP MAKES GOOGLE SAD

- ▶ Make smart use of page titles, headings, canonical tags, and URL's
- ▶ Generate a sitemap and verify it with Google Webmaster Tools
- ▶ Metatag all the things: Open Graph, Google Rich Snippets

YOUR APP IS A BLACK BOX

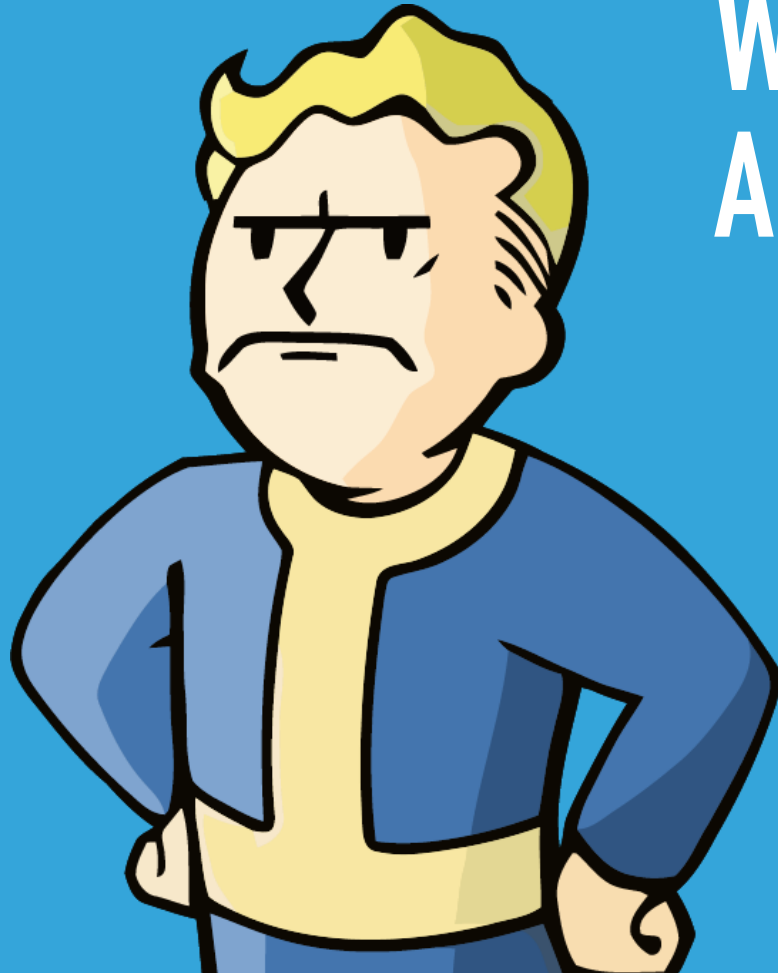
- ▶ Use Google Analytics to track traffic and events
- ▶ Monitor uptime: Pingdom, StatusCake
- ▶ Monitor errors: New Relic, Rollbar, Exception Notifier
- ▶ Monitor performance: New Relic, Skylight

YOUR APP IS SLOW

- ▶ Use Google PageSpeed and WebPagetest to find blocking JS and large images
- ▶ Add appropriate database indexes
- ▶ Avoid N + 1 queries: Bullet gem
- ▶ You might need caching, but probably not
- ▶ You might need more server horsepower, but probably not



OK, I FIXED
EVERYTHING.
I'M DONE, RIGHT?



WELL, YOU FORGET
A FAVICON, BUT...



GOOD ENOUGH! KICK BACK AND CELEBRATE!