NEXT WAVE INFRASTRUCTURE
FOR AN EASIER LIFE

PHIL HAWKSWORTH

HELLO

@PHILHAWKSWORTH

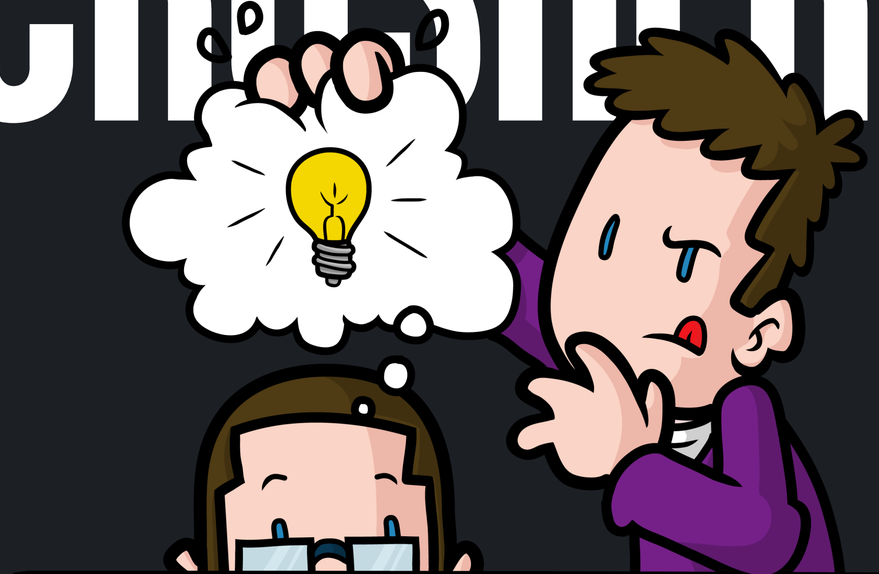
REALTIME FINANCIAL DATA

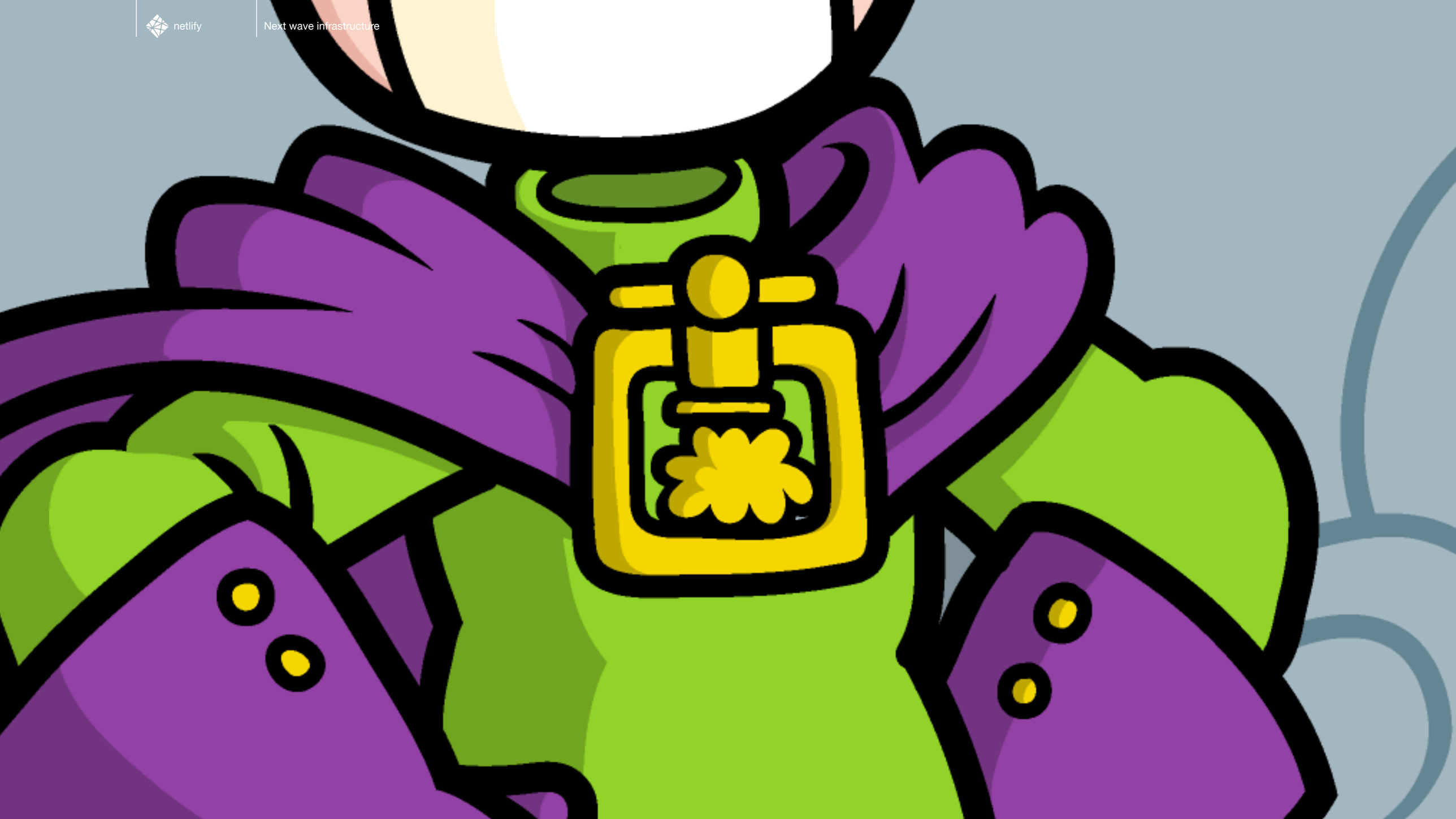
SHIPPING INSUARANCE

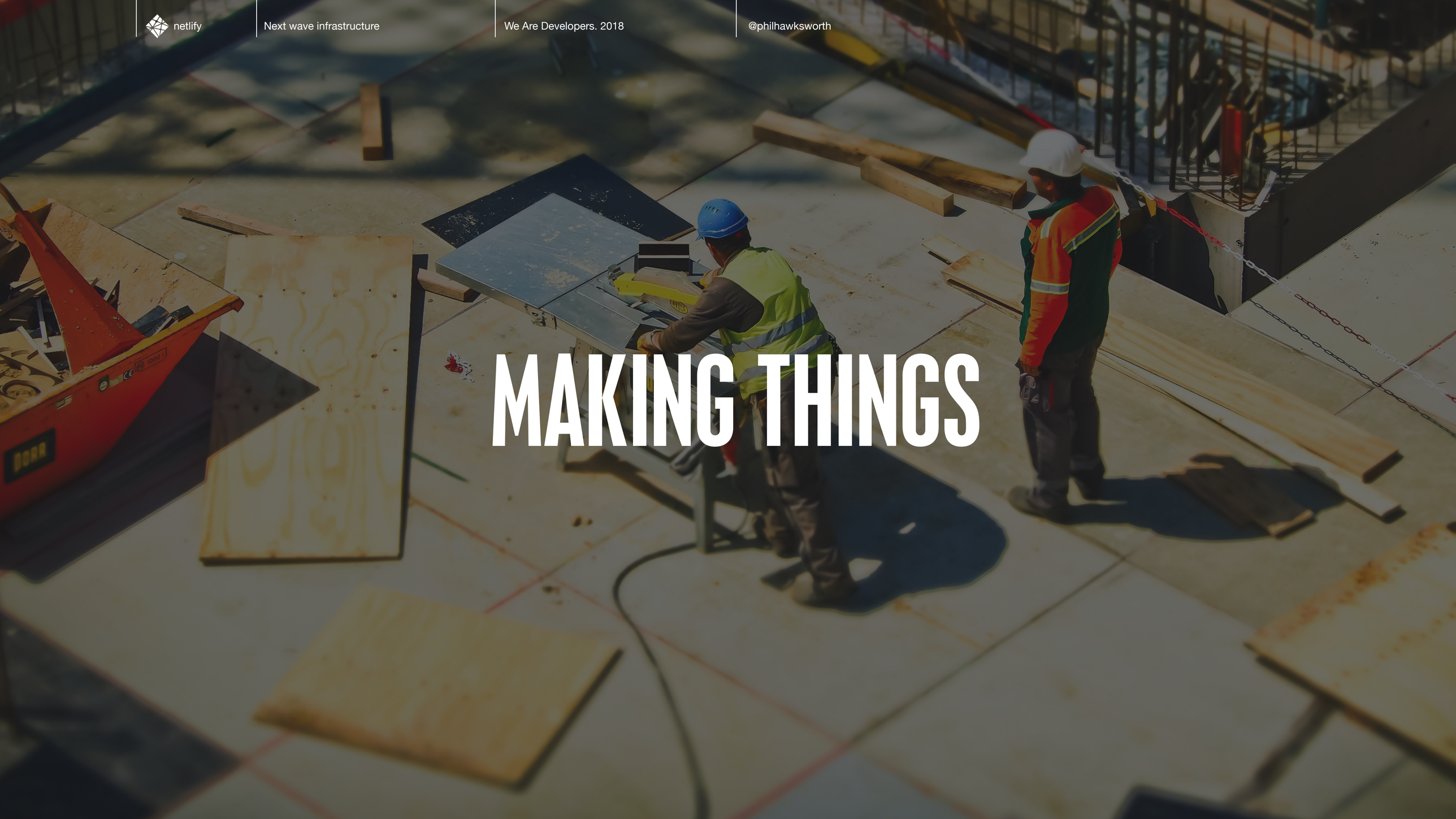
R/GA

netlify

the DREAM CRUSHER



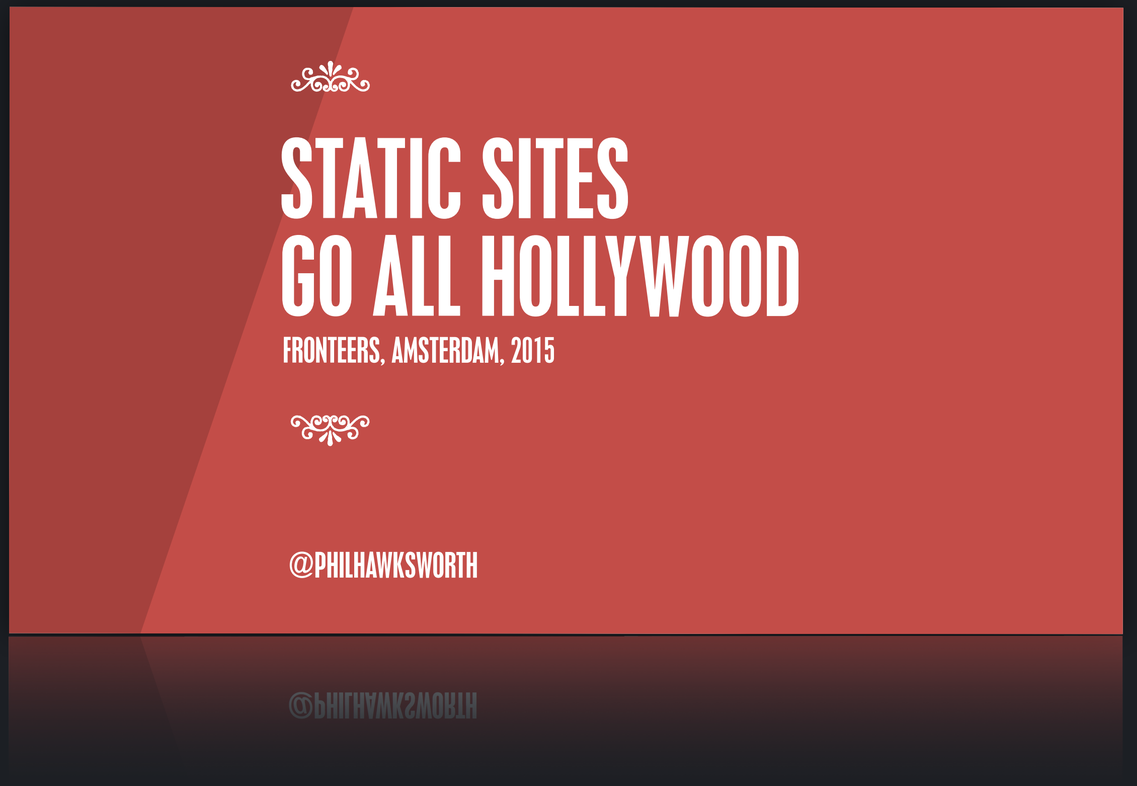




MAKING THINGS

MY TRACK RECORD

I CAN SMELL YOUR
~
CMS


STATIC SITES
GO ALL HOLLYWOOD
FRONTEERS, AMSTERDAM, 2015
@PHILHAWKSWORTH

SO, FOR THIS TALK

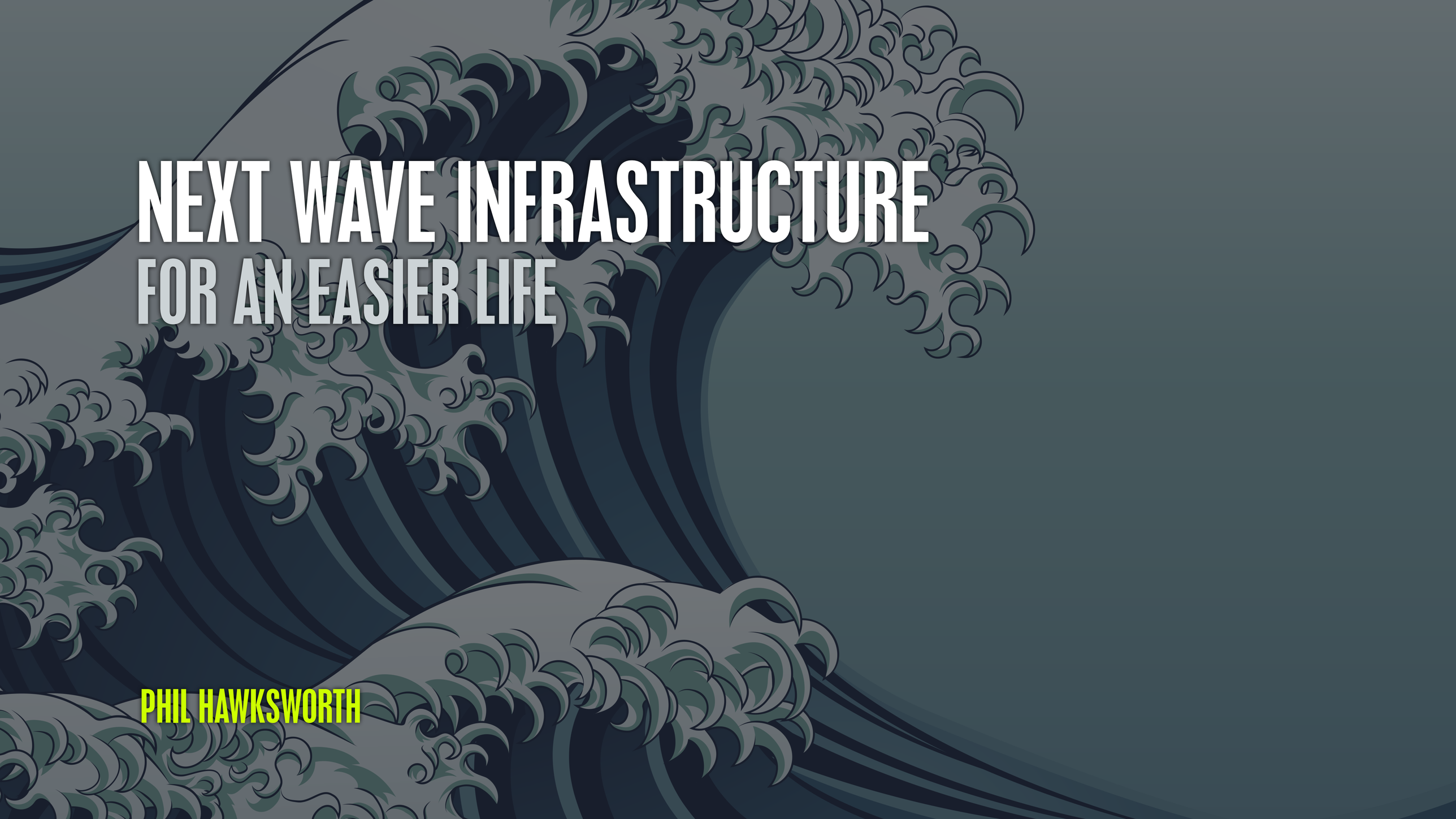
TIME TO JAZZ IT UP

NEXT WAVE INFRASTRUCTURE
FOR AN EASIER LIFE

PHIL HAWKSWORTH

NEXT WAVE INFRASTRUCTURE
FOR AN EASIER LIFE

PHIL HAWKSWORTH



NEXT WAVE INFRASTRUCTURE
FOR AN EASIER LIFE

PHIL HAWKSWORTH

EXOTIC OR NEW

FUNDAMENTALS

WE LEARN A LOT AT CONFERENCES

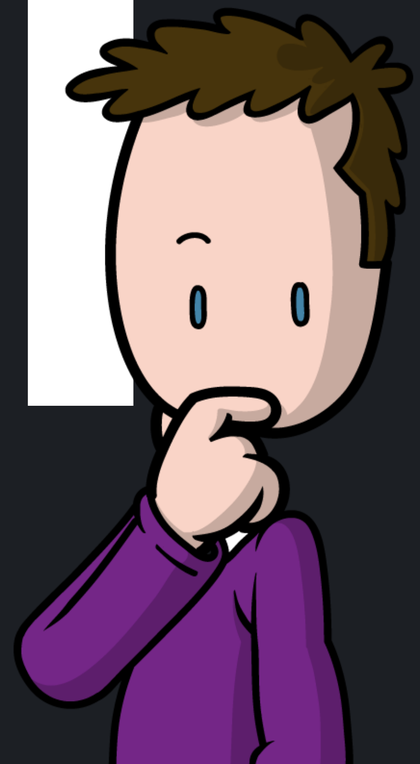
~150 talks ?!

CONFINING THESE LEARNINGS TO THEORY IS A WASTE

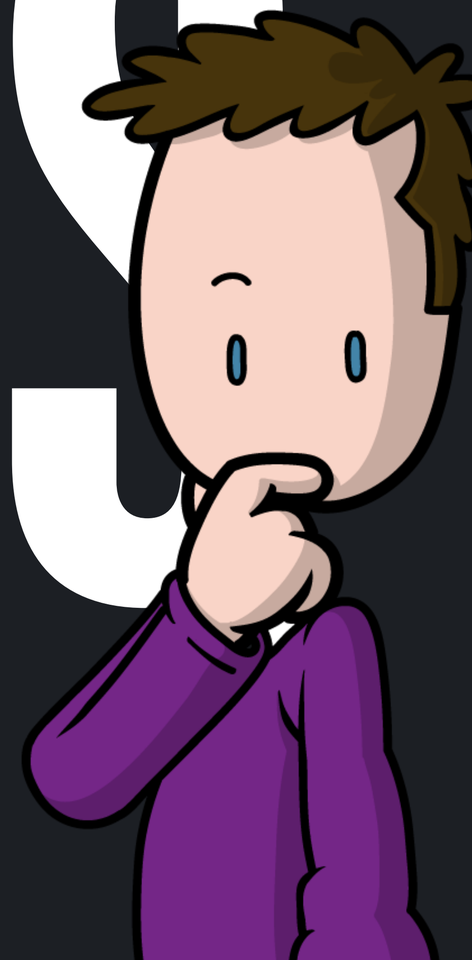
CONFINING THESE LEARNINGS TO OUR LOCAL ENVIRONMENTS IS A WASTE

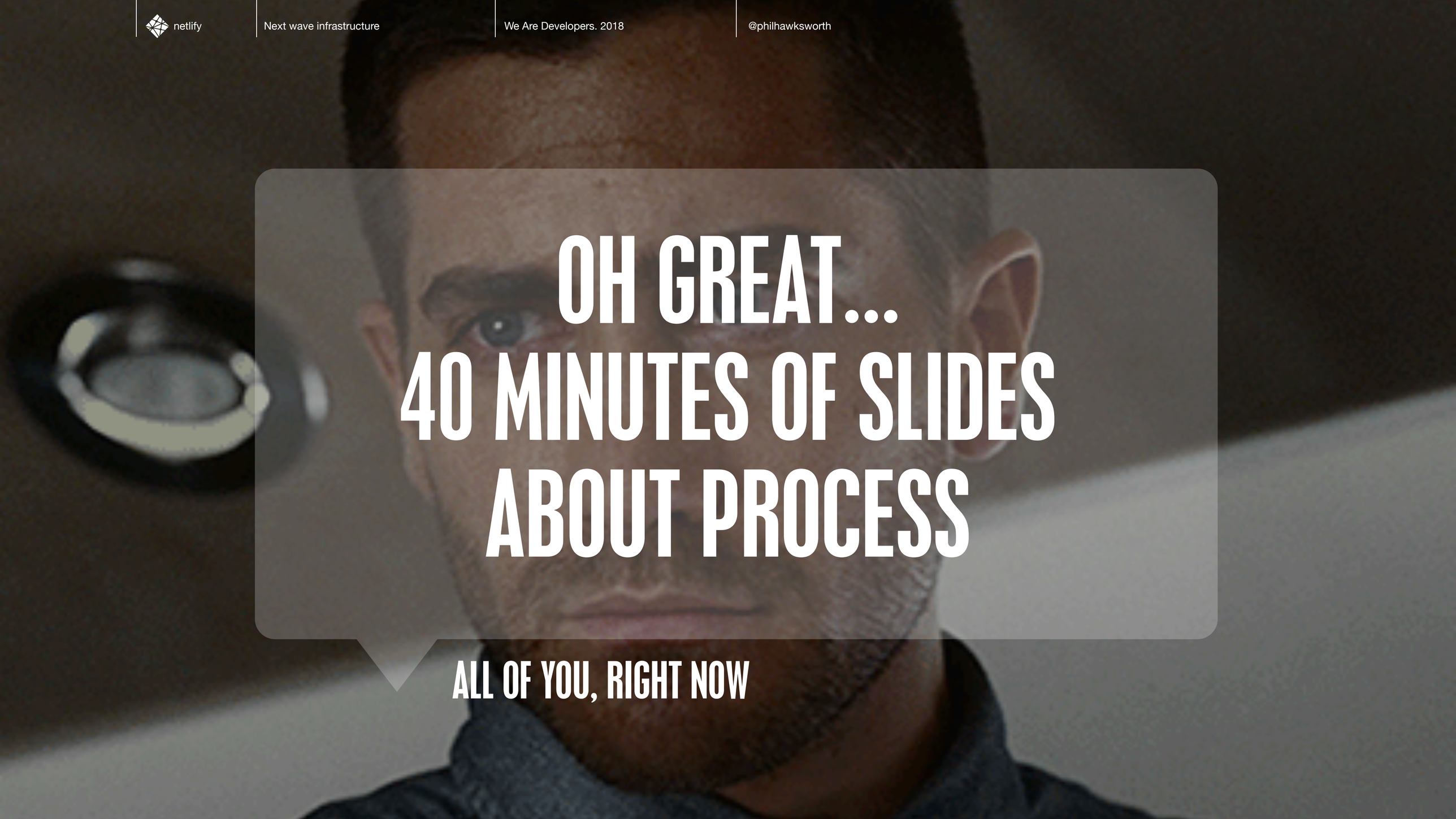
LET'S MAKE SURE THE GOOD STUFF REACHES YOUR USERS

MINDSET



PROCESS




OH GREAT...
40 MINUTES OF SLIDES
ABOUT PROCESS
ALL OF YOU, RIGHT NOW

FOR THE NEXT 40 MINUTES OR SO

/ WHERE DOES IT HURT?
/ 3 STORIES
/ MINDSETS AND RESOURCES

FOR THE NEXT 40 MINUTES OR SO

/ WHERE DOES IT HURT?
/ 3 STORIES
/ MINDSETS AND RESOURCES

WHERE DOES IT HURT?

PROJECTS USUALLY INVOLVE
CLIENTS / DEADLINES / COMPLEXITY

SLEEPLESS NIGHTS

THE WRONG PROJECT TIMELINE

BRIEF

SCOPE

START

RE-SCOPE

CLIENT REVIEW

“FINAL” SIGN OFF

LAUNCH

FIXES

AWARDS

LAUNCH DAY

NEWSFLASH

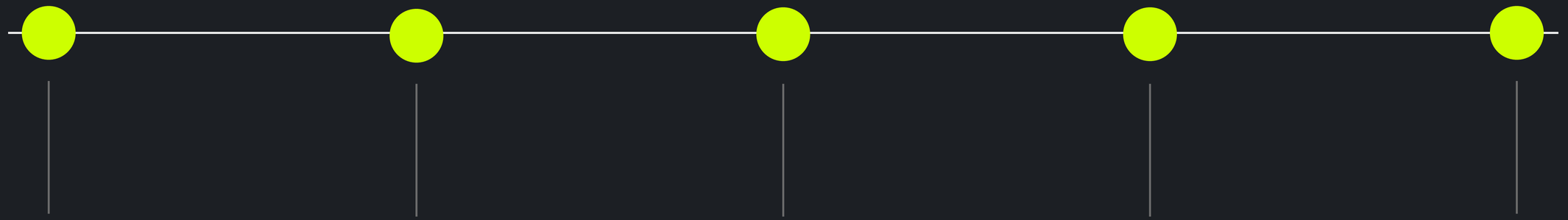
PROJECTS CAN BE HARD

PROJECTS USUALLY INVOLVE LEARNING

PROJECTS USUALLY INVOLVE CHANGE

INFRASTRUCTURE

OUR EVOLVING APPROACH TO INFRASTRUCTURE



ON SITE HARDWARE

SOME RACK SPACE

(not Rackspace)

VIRTUAL SERVER

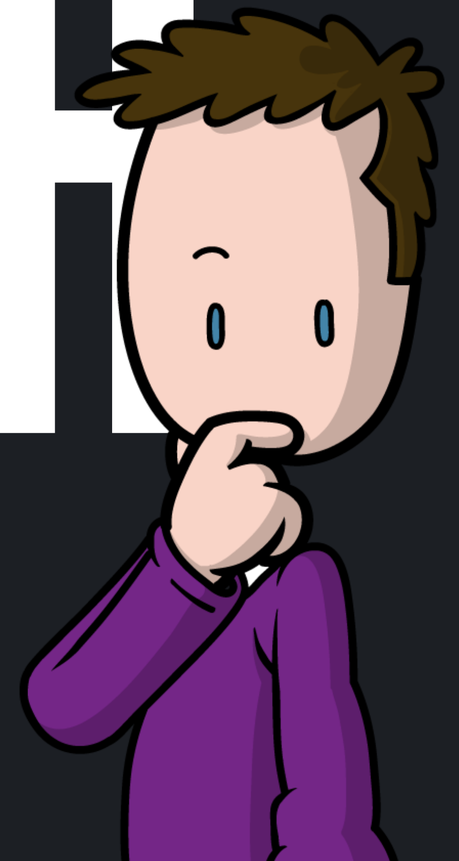
(perhaps Rackspace)

SOFTWARE AAS

FUNCTIONS AAS

NEW DEPLOYMENT CONVENTIONS

APPROACH



THIS IS WHERE IT HURTS

MANAGING CHANGE
MANAGING THE UNKNOWABLE

THIS IS WHERE IT HURTS

AT CRUNCH TIME, AS THE PRESSURE MOUNTS

FOR THE NEXT 40 MINUTES OR SO

/ WHERE DOES IT HURT?
/ 3 STORIES
/ MINDSETS AND RESOURCES

Story one

DEPLOYING ON MY FIRST DAY

A LARGE NATION-WIDE HEALTHCARE SITE

IT SHOULD HAVE GONE LIVE ON FRIDAY

MY NEW BOSS

CAN YOU HELP THE TEAM FIGURE OUT THE DEPLOYMENT?

MY NEW BOSS

THE PERFECT PROJECT TIMELINE

THE DEPLOYMENT

STAGING

BOB

ALICE

PROD

FFFFFFFFFTP

UNKNOWABLE STATE

UNREPEATABLE PROCESS

DID IT GO LIVE?

YES, IT DID

WAS IT CORRECT?

YES.
PROBABLY.
HONESTLY, I DON'T THINK WE CAN EVERY REALLY KNOW

HOW DID THE NEXT DEPLOYMENT GO?

I'M NOT READY TO TALK ABOUT THAT

DO YOU NEED A HUG?

YES. YES I DO

Lessons

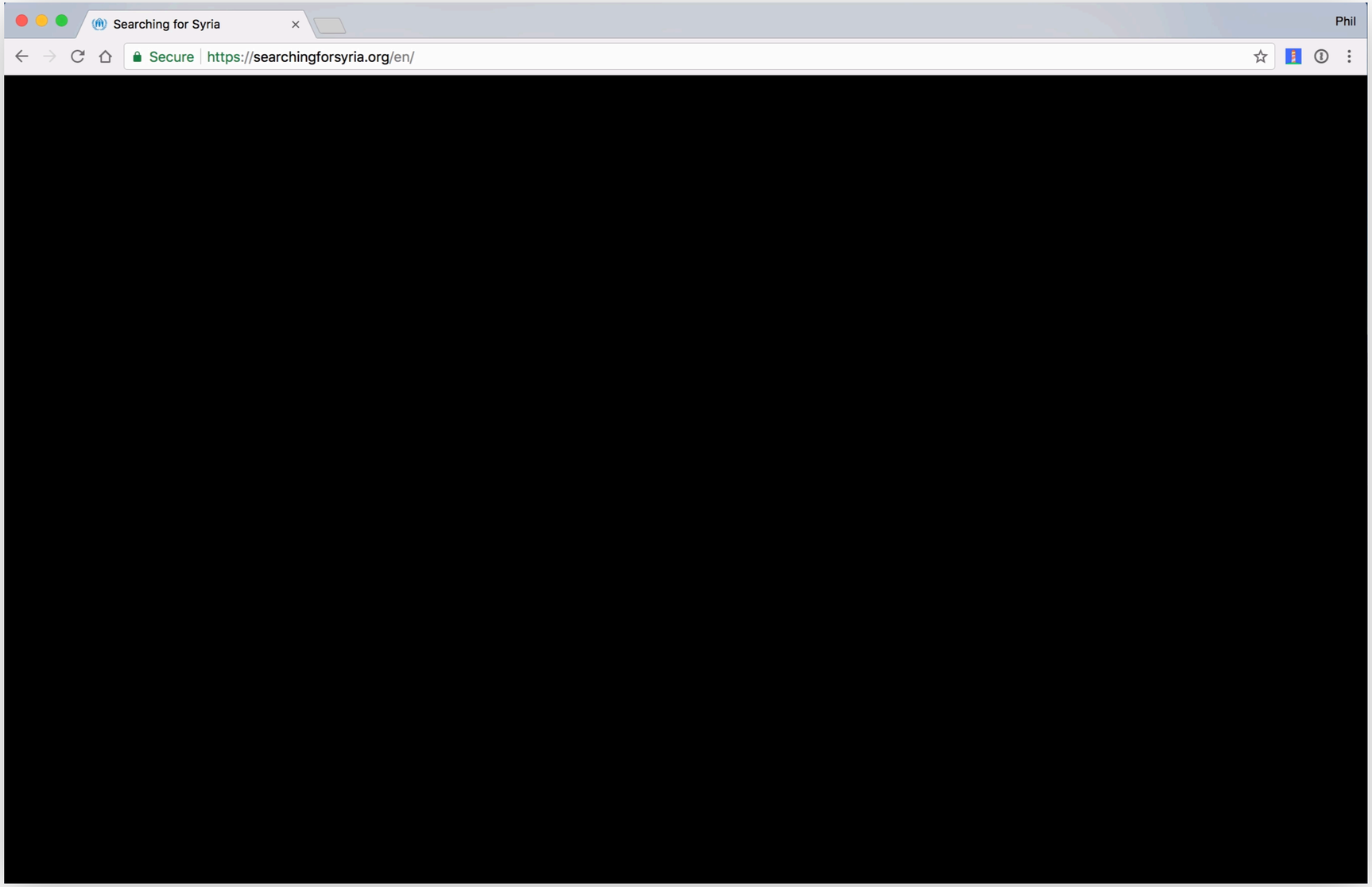
VERSION CONTROL SHOULD EXTEND TO YOUR DEPLOYMENTS

HUMAN INTERVENTION IN DEPLOYMENTS IS UNDESIRABLE

HOLISTIC DEPLOYS ARE PREFERABLE TO PIECEMEAL DEPLOYS

Story two

SEARCHING FOR SYRIA


Searching for Syria
Phil
Secure
https://searchingforsyria.org/en/

LOTS OF CHANGE

SIGNIFICANT POLITICAL SENSITIVITY

GREATER STAKEHOLDER DIVERSITY

A GLOBAL LAUNCH

THE PERFECT PROJECT TIMELINE

BRIEF

SCOPE

START

RE-SCOPE

CLIENT REVIEW

“FINAL” SIGN OFF

“FIGURE OUT” DEPLOYMENT

LAUNCH

FIXES

AWARDS

DELIVERIES

DELIVER *to* QA

DELIVER *to* PRODUCERS

DELIVER *to* TRANSLATIONS TEAMS

DELIVER *to* THE CLIENT

DELIVER *to* THE CLIENT'S BOSSES

DELIVER *to* THE PUBLIC

LET'S DELIVER ANY VERSION AT ANY TIME

OUR AMBITION

VERSION CONTROL

TAGS SHOULD CREATE RESOURCES AT URLS

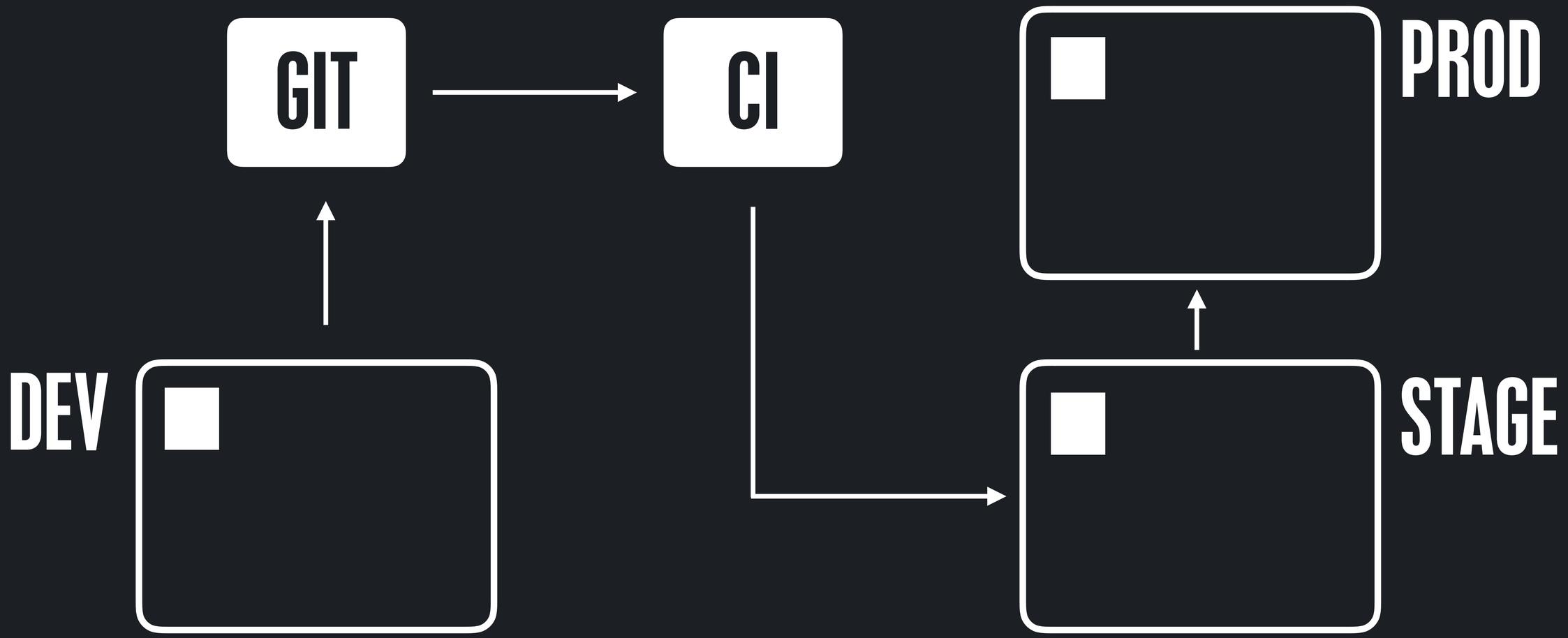
URLS FTW

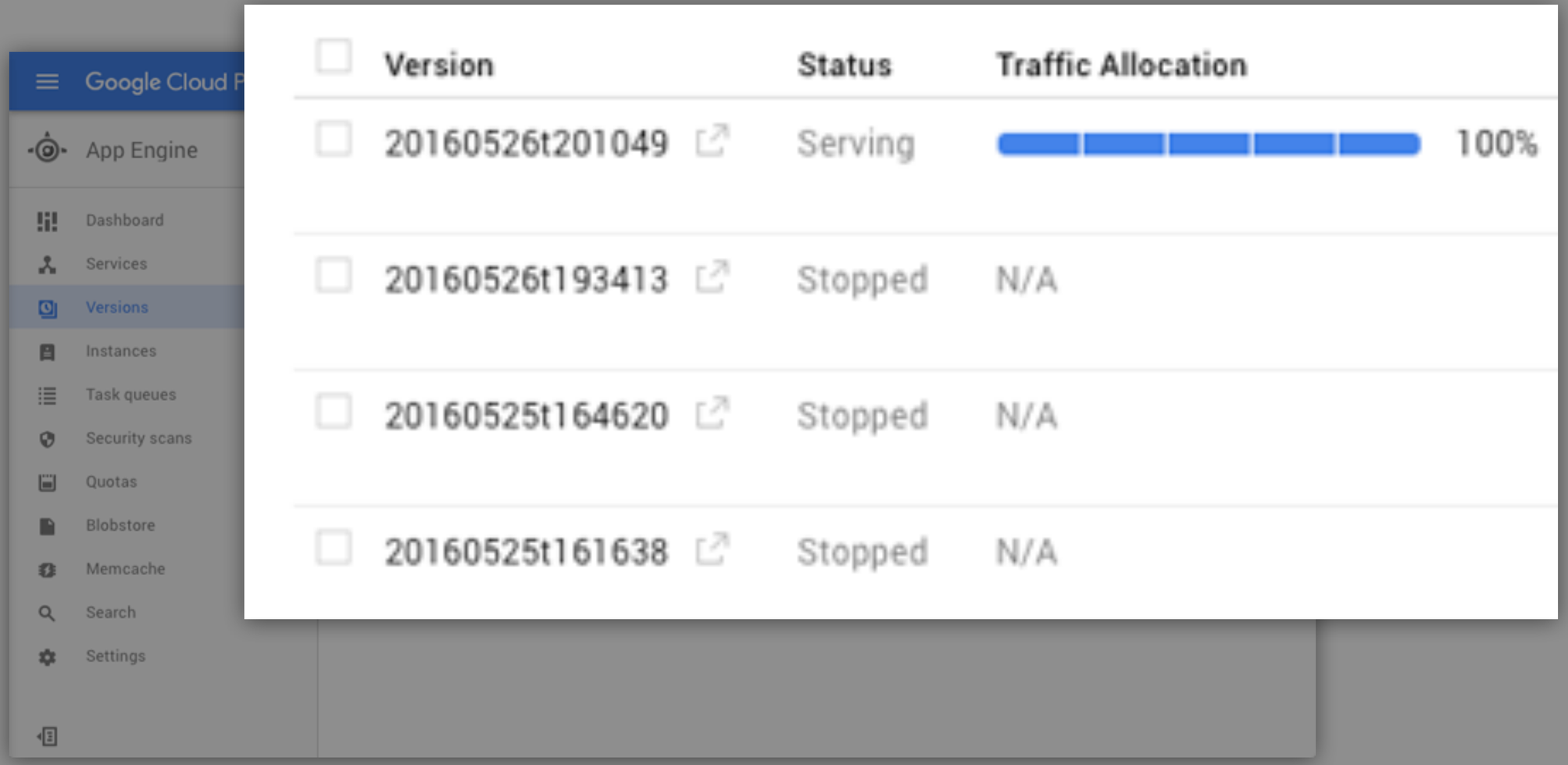
AITCH TEE TEE PEE DOUBLE MEH

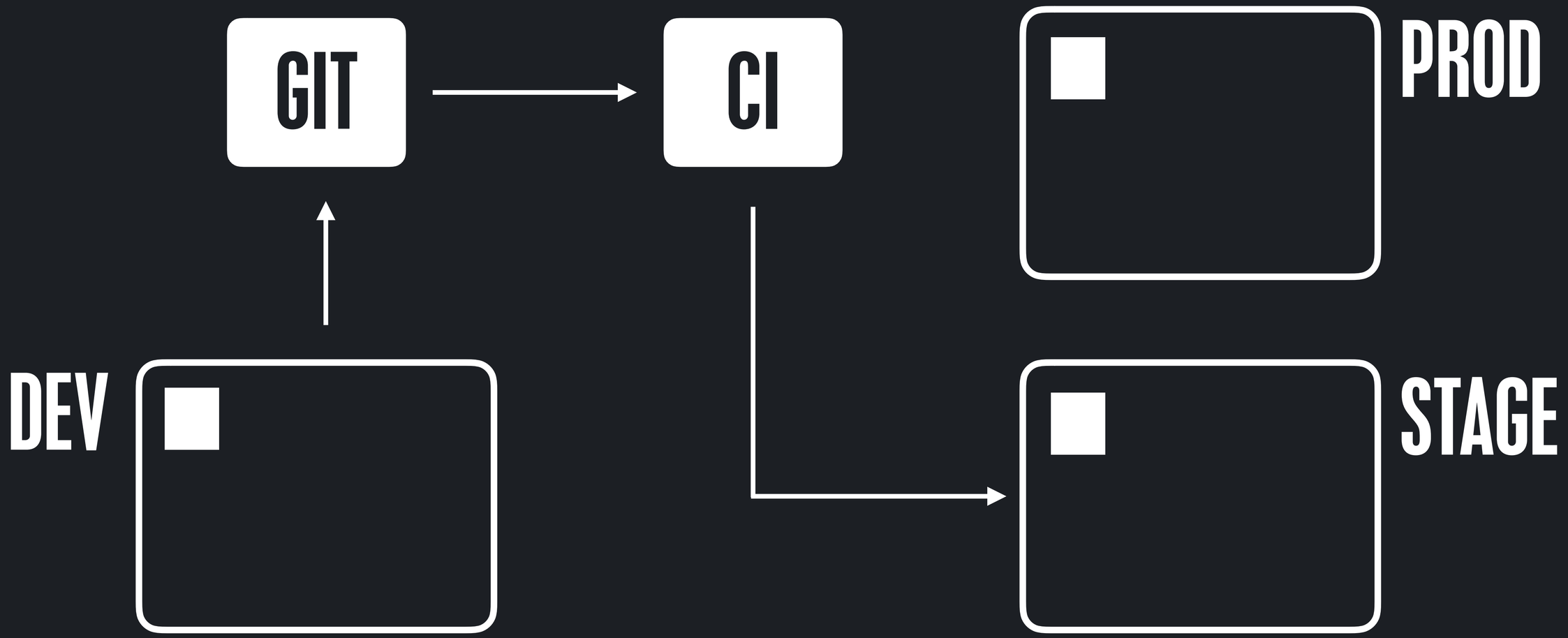
ALEX SEXTON

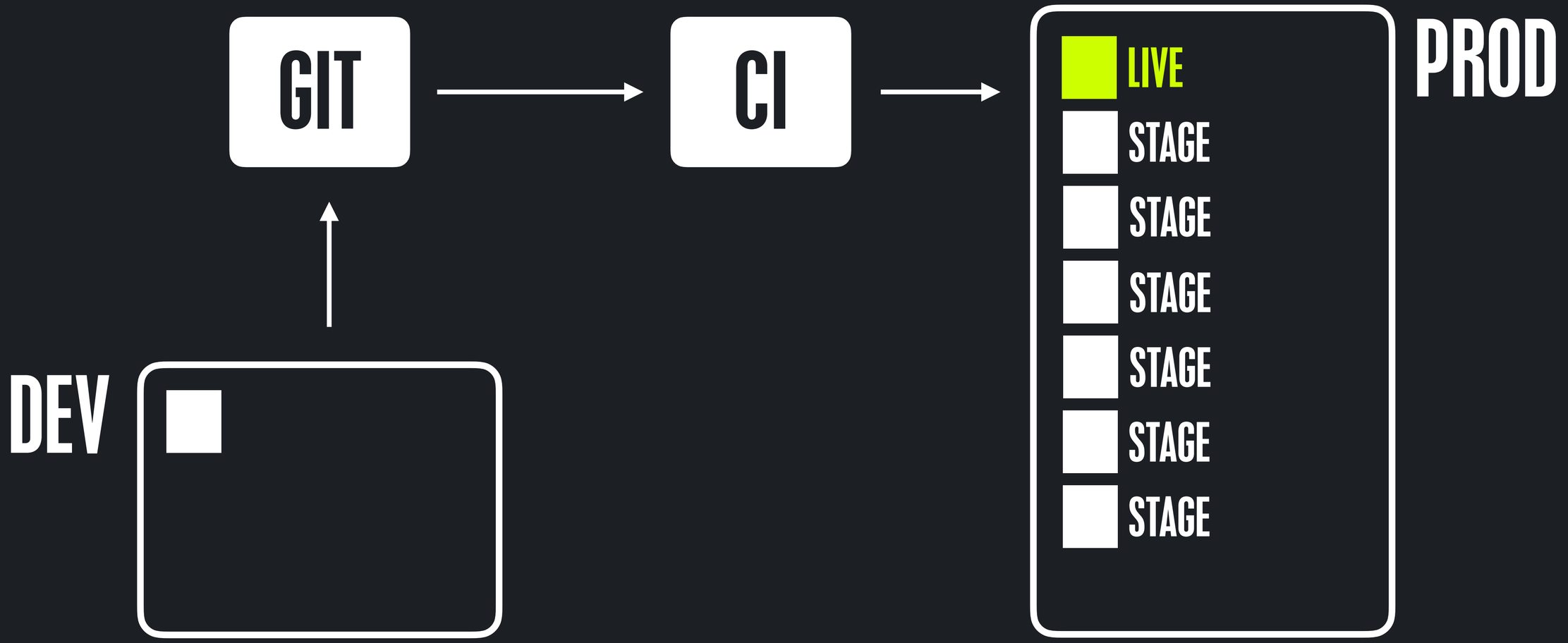
http://foobar.com

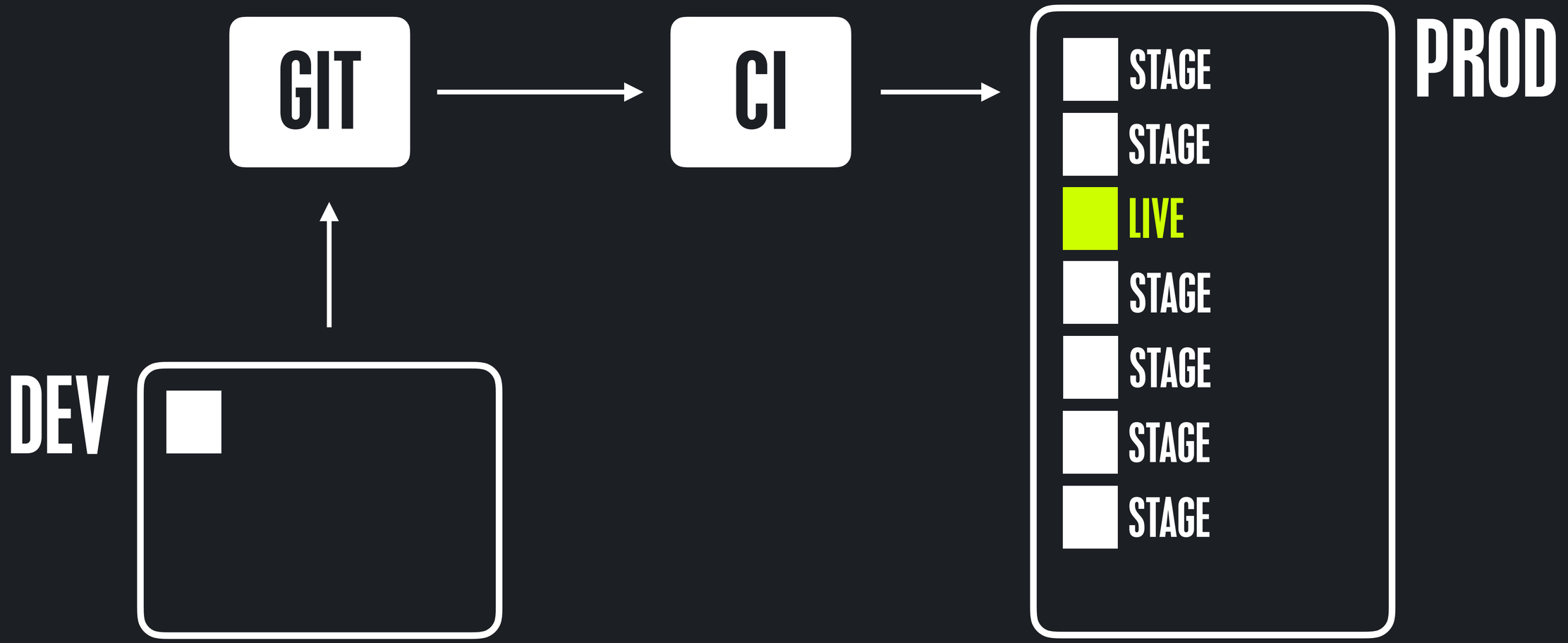
TAGS SHOULD CREATE RESOURCES AT URLS


GIT
CI
PROD
DEV
STAGE


Google Cloud P
App Engine
Dashboard
Services
Versions
Instances
Task queues
Security scans
Quotas
Blobstore
Memcache
Search
Settings
Version
Status
Traffic Allocation
20160526t201049
Serving
100%
20160526t193413
Stopped
N/A
20160525t164620
Stopped
N/A
20160525t161638
Stopped
N/A


GIT
CI
PROD
DEV
STAGE


GIT
CI
PROD
LIVE
STAGE
STAGE
STAGE
STAGE
STAGE
STAGE
DEV


GIT
CI
PROD
STAGE
STAGE
LIVE
STAGE
STAGE
STAGE
STAGE
DEV

DEMOS / DISCUSSIONS
TESTS / ISSUES / SIGNOFF

ALL HAPPENED AGAINST KNOWN VERSIONS

Lessons

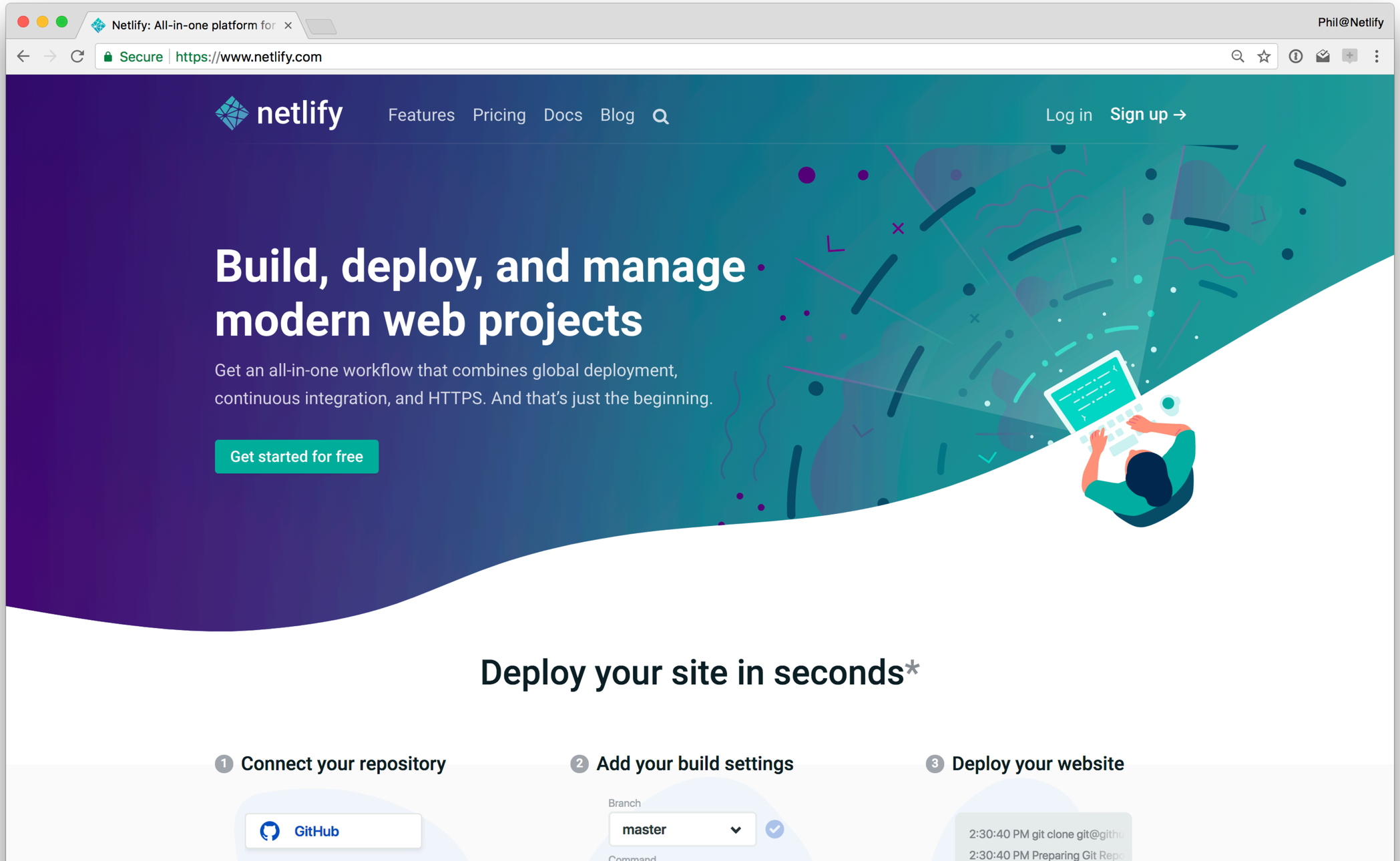
ADDRESSABLE AND ACCESSIBLE BUILD VERSIONS ARE A HUGE WIN

DECIDING WHEN AND WHAT TO TAG REQUIRES COORDINATION

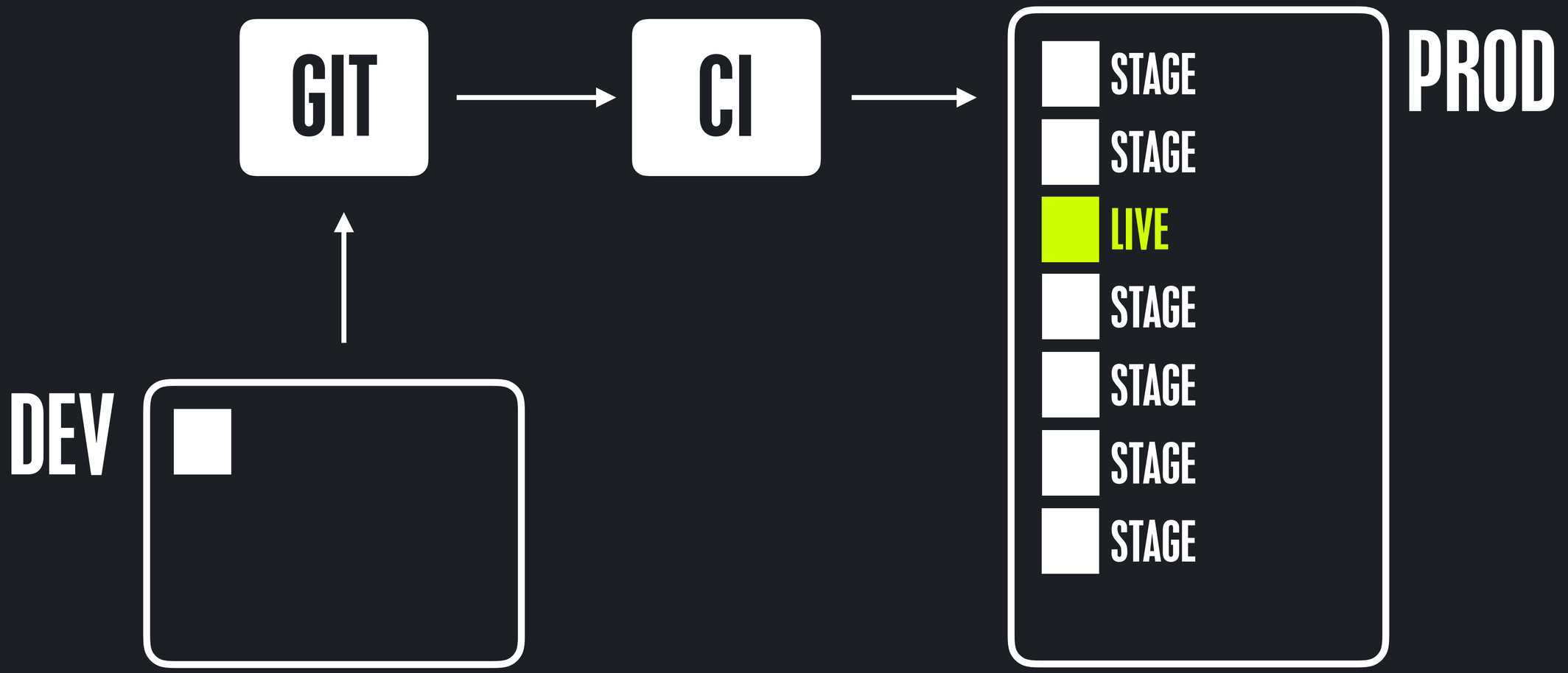
IMMUTABLE DEPLOYS TO PROD REMOVE UNCERTAINTY FROM LAUNCH DAY

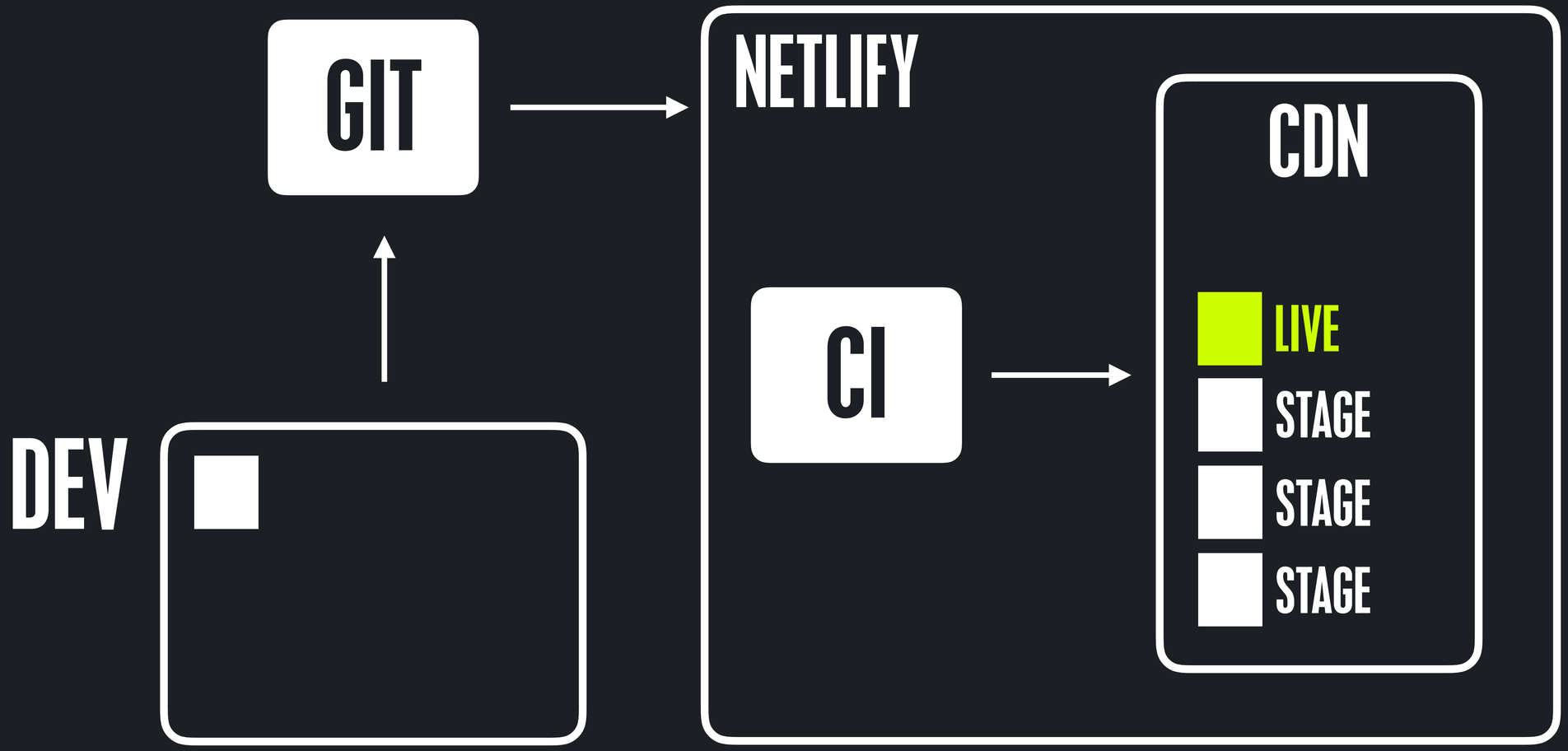
Story three

NETLIFY BUILDING NETLIFY


Netlify: All-in-one platform for
Phil@Netlify
Secure https://www.netlify.com
netlify
Features Pricing Docs Blog
Log in Sign up →
Build, deploy, and manage modern web projects
Get an all-in-one workflow that combines global deployment, continuous integration, and HTTPS. And that's just the beginning.
Get started for free
Deploy your site in seconds*
1 Connect your repository
GitHub
2 Add your build settings
Branch
master
3 Deploy your website
2:30:40 PM git clone git@githu
2:30:40 PM Preparing Git Repo

NETLIFY.COM IS A JAMSTACK SITE HOSTED ON NETLIFY USING NETLIFY TO NETLIFY NETLIFY

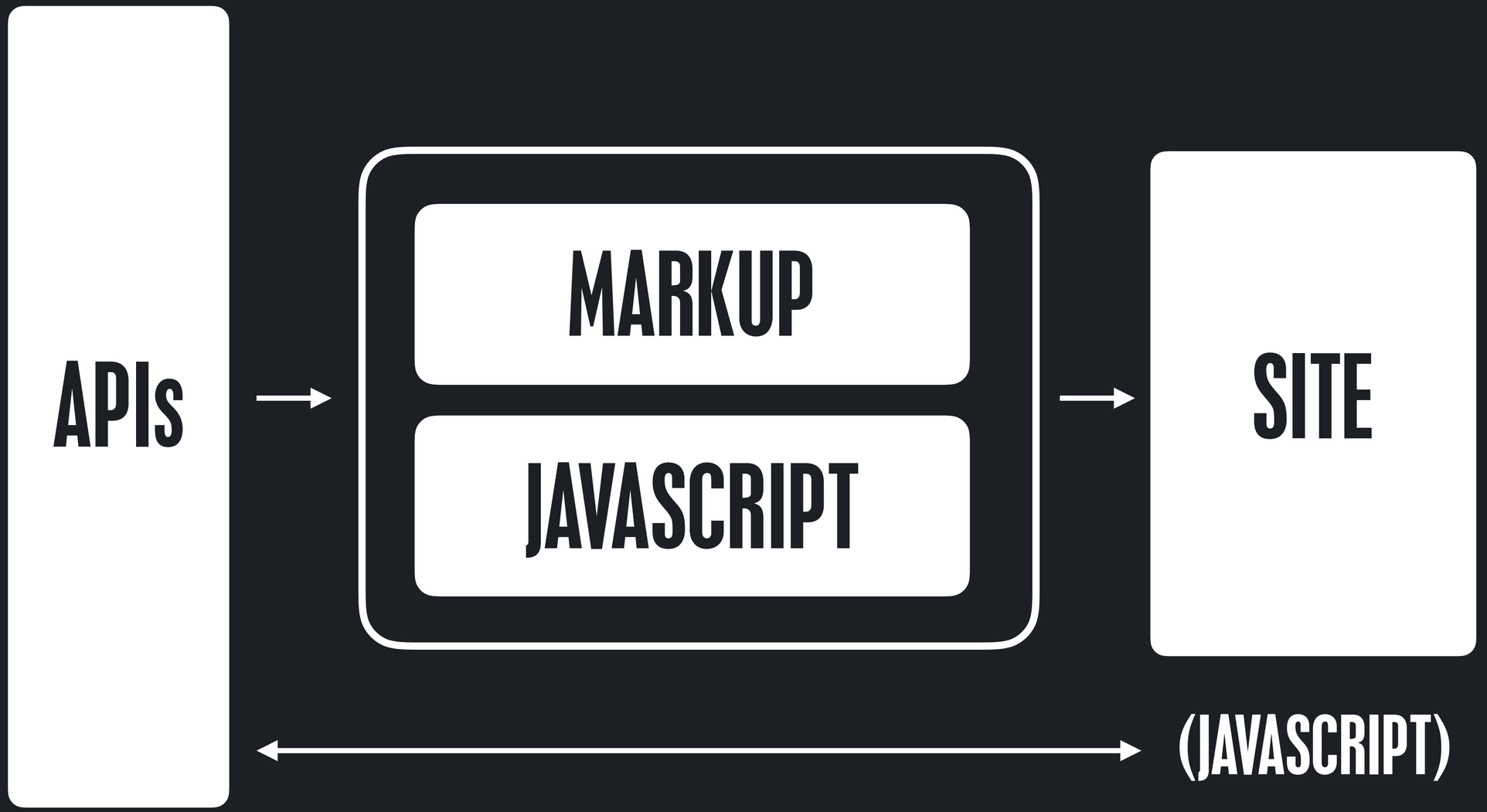

GIT
CI
PROD
STAGE
STAGE
LIVE
STAGE
STAGE
STAGE
STAGE
DEV

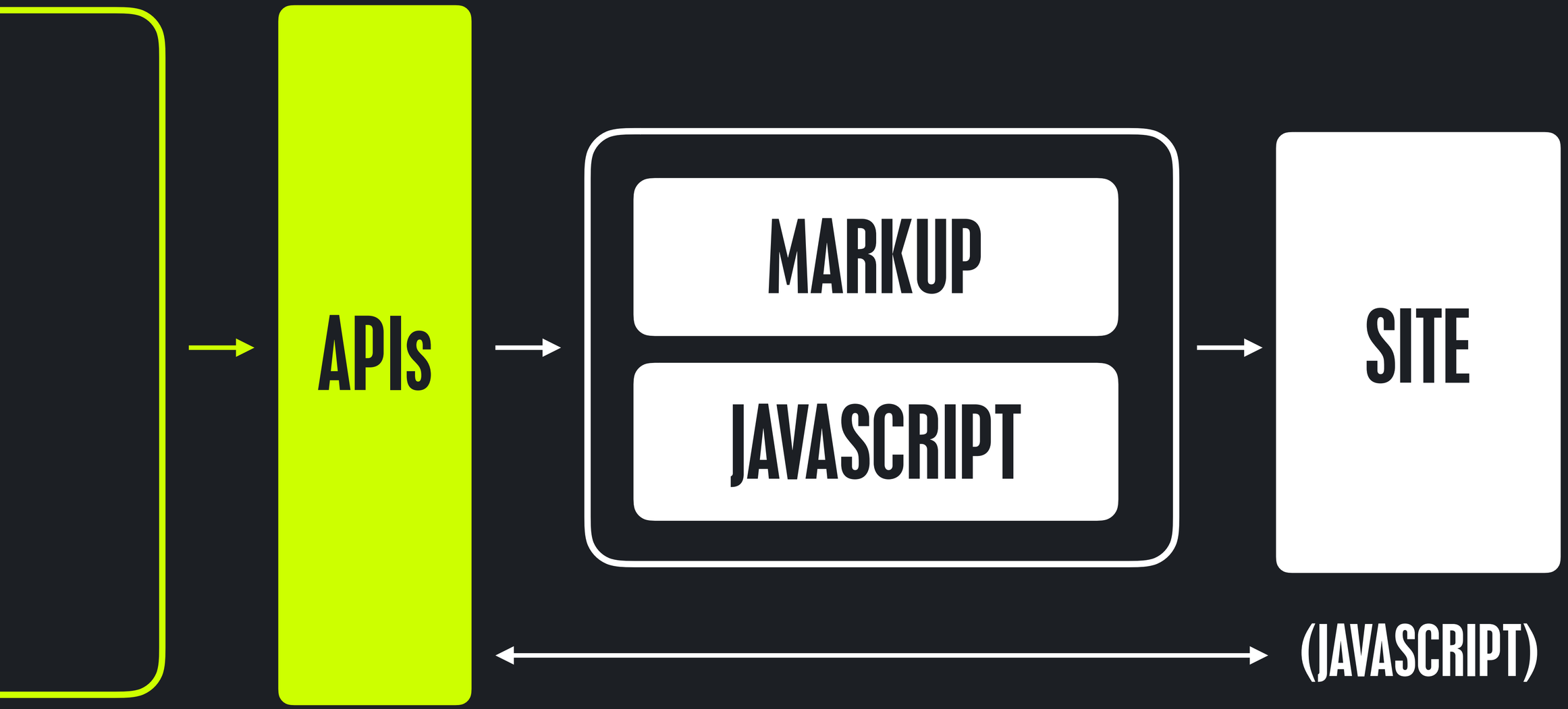

GIT
NETLIFY
CDN
CI
LIVE
STAGE
STAGE
STAGE
DEV

A GIT-BASED WORKFLOW ALL THE WAY TO PRODUCTION

jamstack

JAVASCRIPT / API / MARKUP


APIs
MARKUP
JAVASCRIPT
SITE
(JAVASCRIPT)


APIs
MARKUP
JAVASCRIPT
SITE
(JAVASCRIPT)

BUILDS ARE BASED ON GIT COMMITS, SO WE HAVE HISTORY

Sites | Netlify

Phil

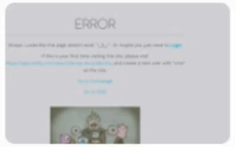
Secure https://app.netlify.com/teams/netlify/sites

Netlify

Sites DNS zones Members Audit Log Team settings

Search site

New site from Git



internal-docs
Deploys from GitHub

Owned by Netlify
Last update at 4:31 am (8 hours ago)

storybook
Deploys from GitHub

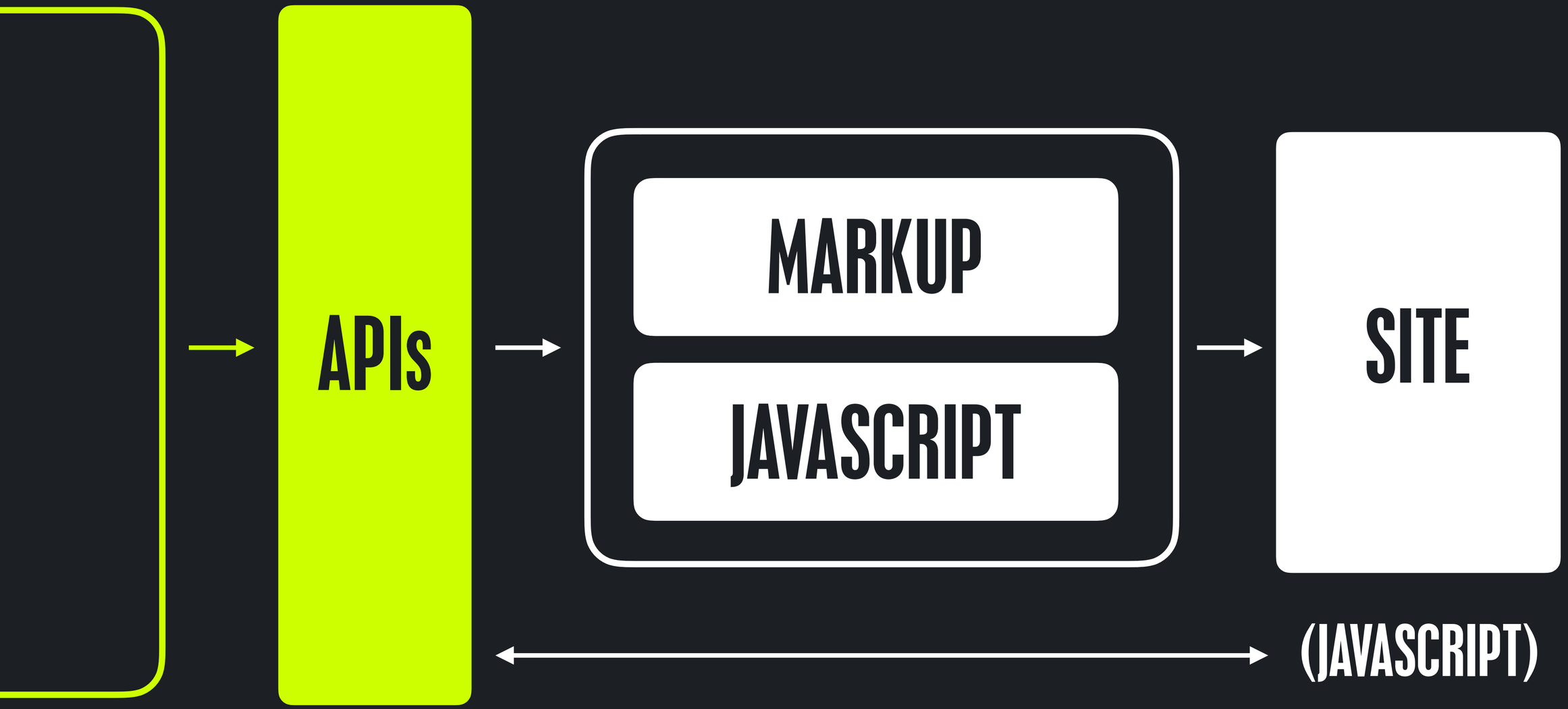
Owned by Netlify
Last update at 2:35 am (10 hours ago)

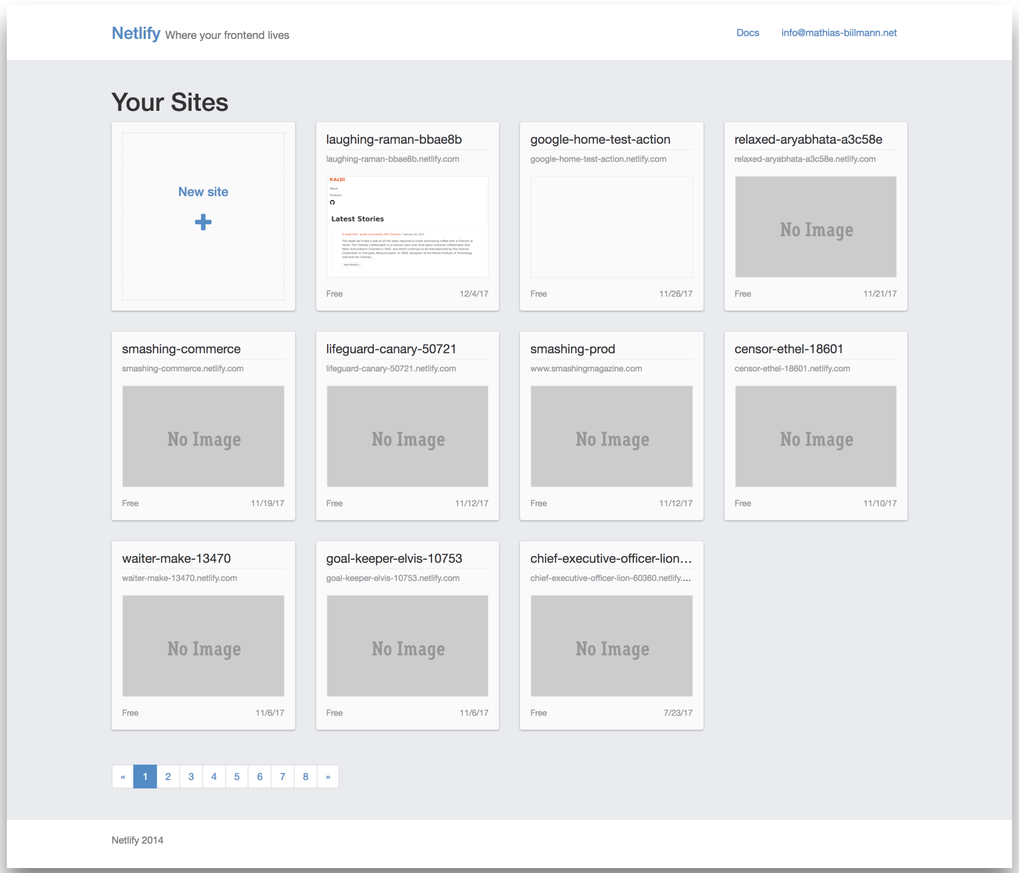
app
Deploys from GitHub

Owned by Netlify
Last update at 2:35 am (10 hours ago)

func-it-up
Deploys from GitHub

Owned by Netlify
Last update at 1:12 am (11 hours ago)


APIs
MARKUP
JAVASCRIPT
SITE
(JAVASCRIPT)


Netlify Where your frontend lives
Docs
info@mathias-biilmann.net
Your Sites
New site
laughing-raman-bbae8b
laughing-raman-bbae8b.netlify.com
Free 12/4/17
google-home-test-action
google-home-test-action.netlify.com
Free 11/26/17
relaxed-aryabhata-a3c58e
relaxed-aryabhata-a3c58e.netlify.com
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smashing-prod
www.smashingmagazine.com
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No Image
Free 11/6/17
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chief-executive-officer-lion-60360.netlify....
No Image
Free 7/23/17
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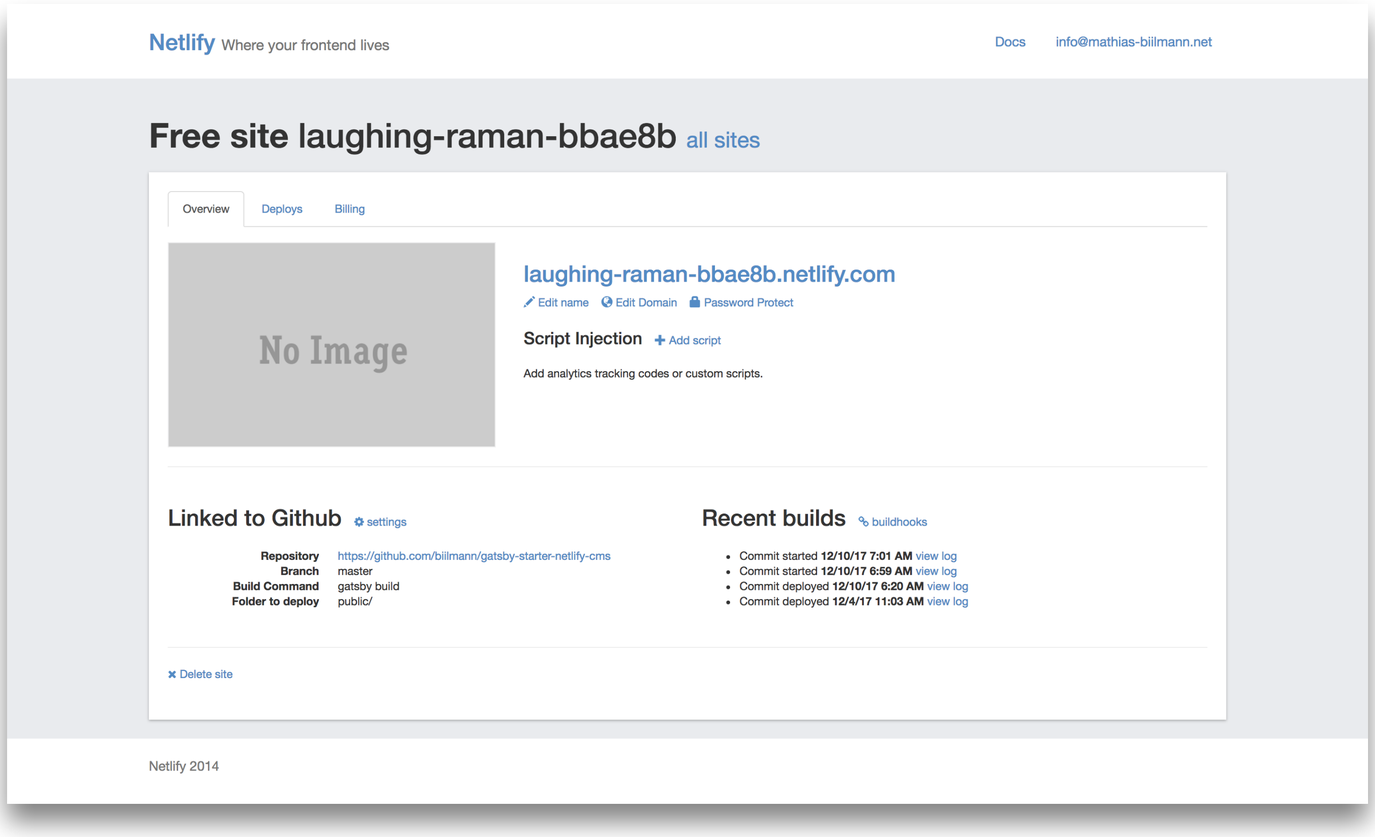
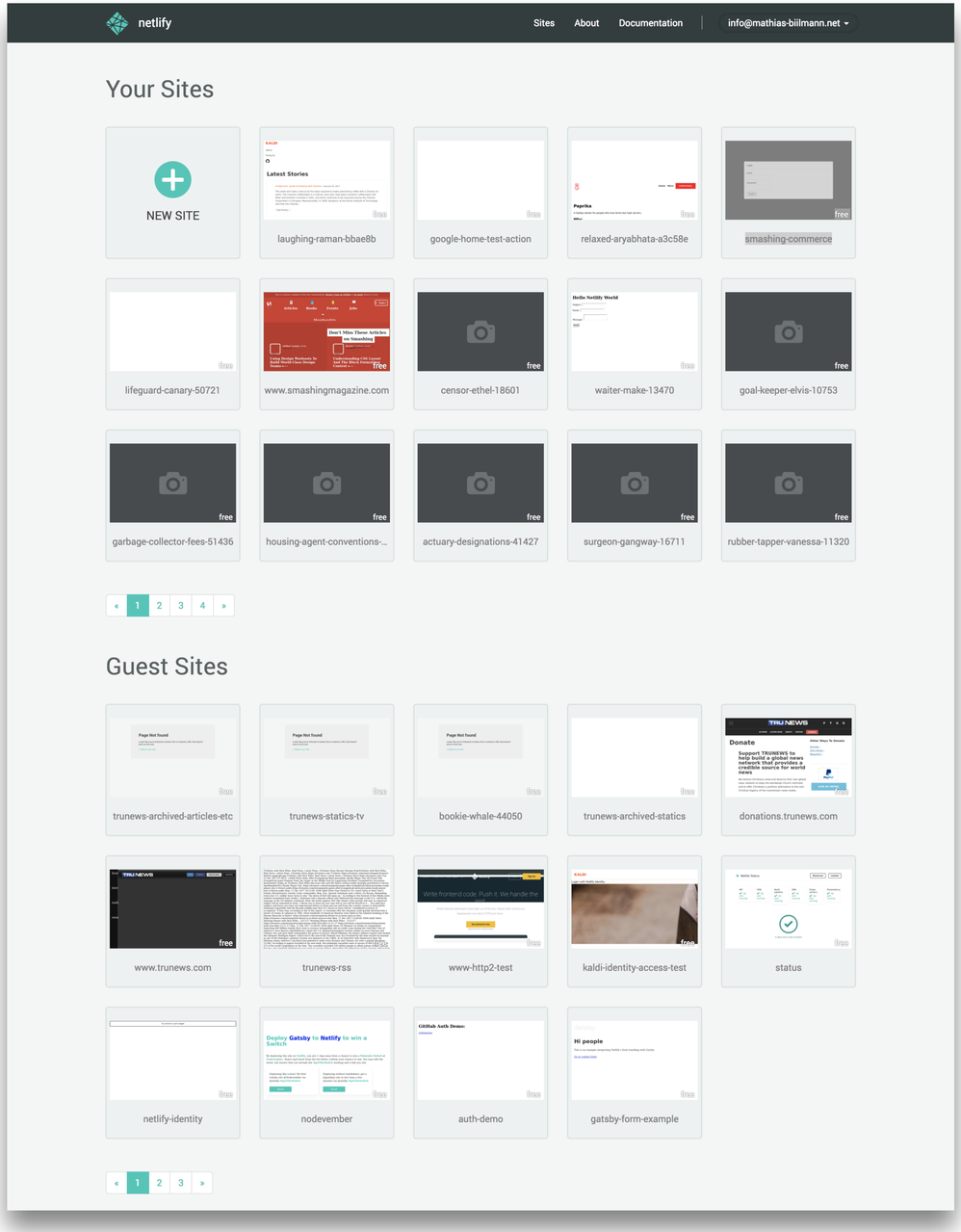
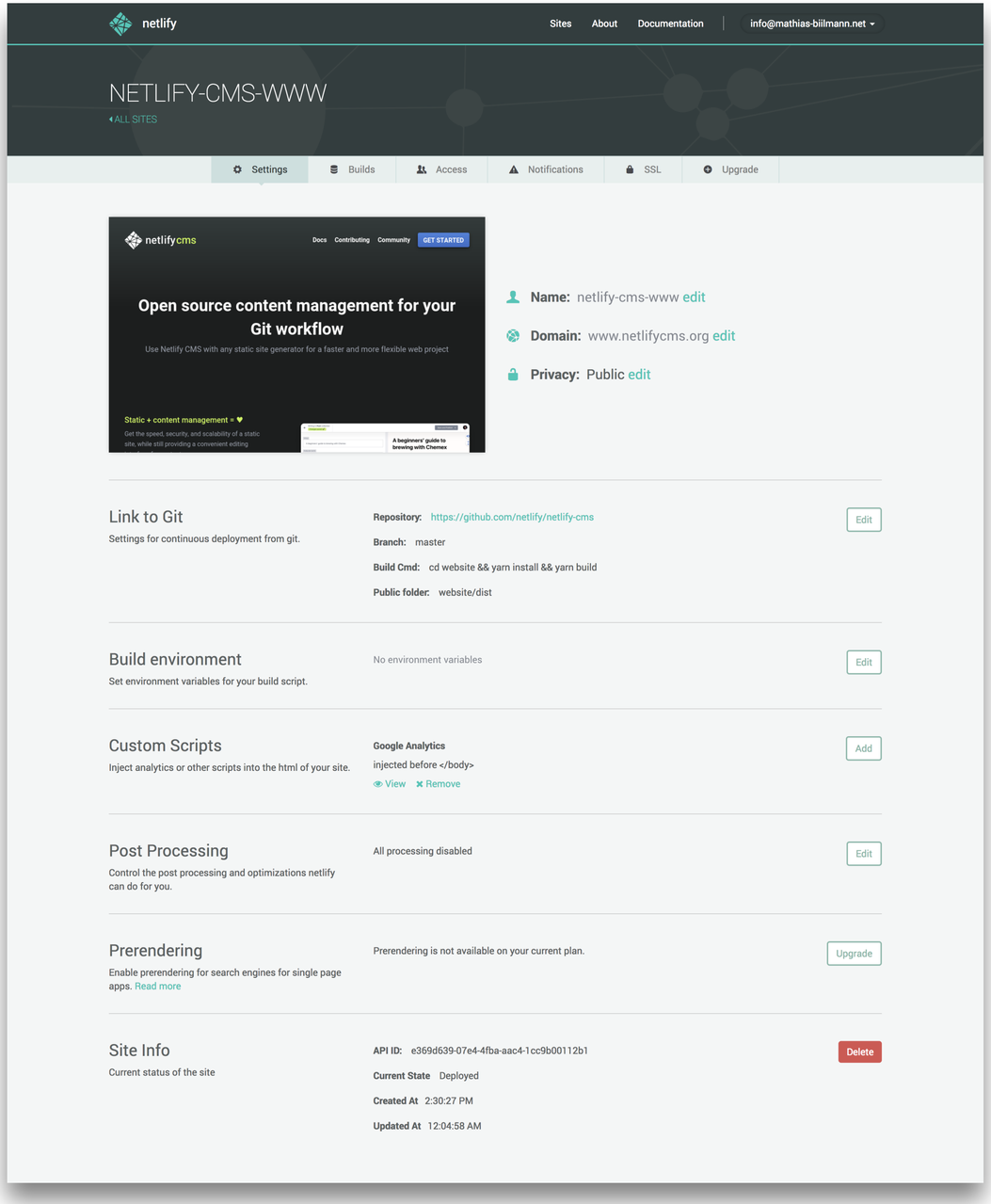
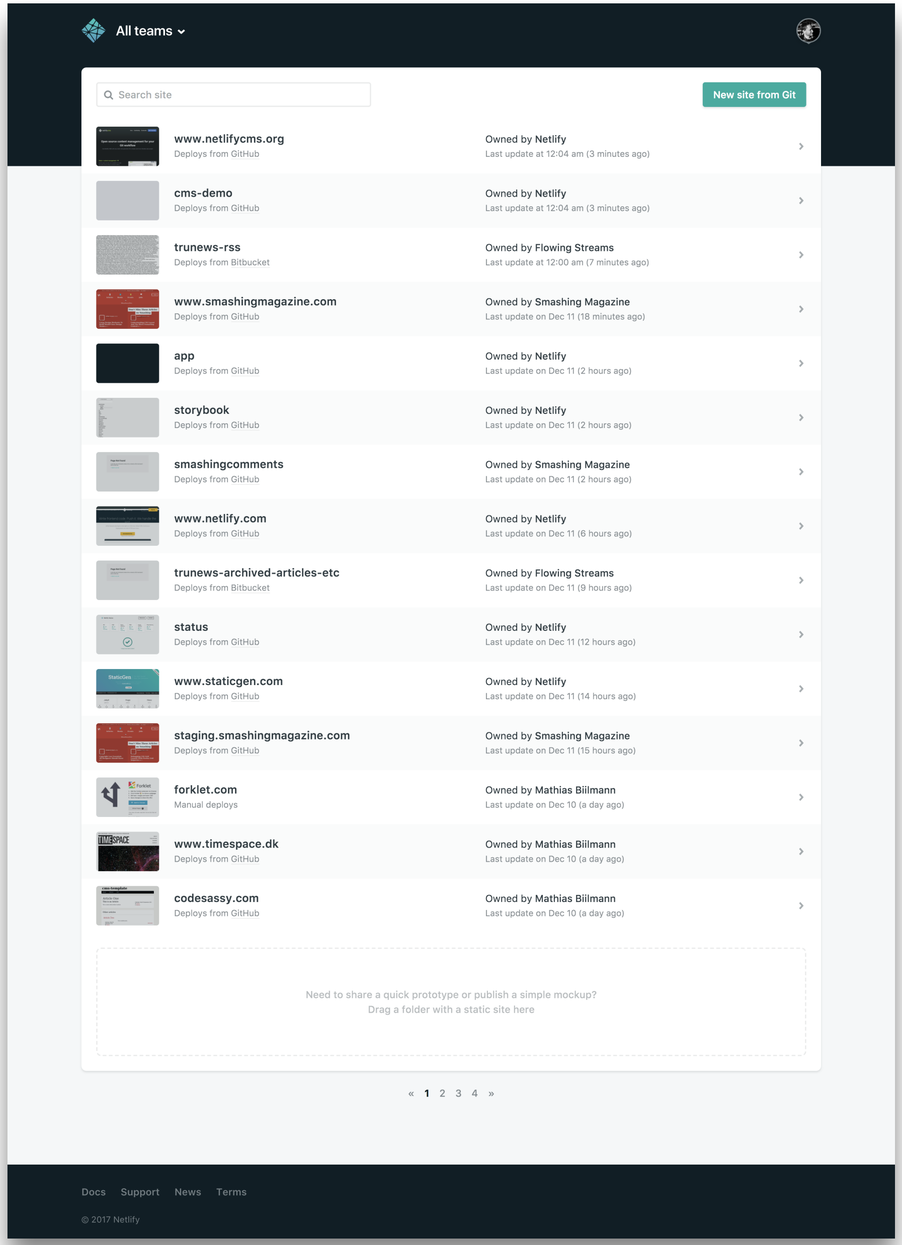
Netlify 2014


Netlify Where your frontend lives
Docs
info@mathias-biilmann.net
Free site laughing-raman-bbae8b all sites
Overview
Deploys
Billing
No Image
laughing-raman-bbae8b.netlify.com
Edit name
Edit Domain
Password Protect
Script Injection
Add script
Add analytics tracking codes or custom scripts.
Linked to Github
settings
Repository https://github.com/biilmann/gatsby-starter-netlify-cms
Branch master
Build Command gatsby build
Folder to deploy public/
Recent builds
buildhooks
Commit started 12/10/17 7:01 AM view log
Commit started 12/10/17 6:59 AM view log
Commit deployed 12/10/17 6:20 AM view log
Commit deployed 12/4/17 11:03 AM view log
Delete site
Netlify 2014


netlify
Sites
About
Documentation
info@mathias-biilmann.net
Your Sites
NEW SITE
laughing-raman-bbae8b
google-home-test-action
relaxed-aryabhata-a3c58e
smashing-commerce
lifeguard-canary-50721
www.smashingmagazine.com
censor-ethel-18601
waiter-make-13470
goal-keeper-elvis-10753
garbage-collector-fees-51436
housing-agent-conventions-...
actuary-designations-41427
surgeon-gangway-16711
rubber-tapper-vanessa-11320
« 1 2 3 4 »
Guest Sites
trunews-archived-articles-etc
trunews-statics-tv
bookie-whale-44050
trunews-archived-statics
donations.trunews.com
www.trunews.com
trunews-rss
www-http2-test
kaldi-identity-access-test
status
netlify-identity
nodevember
auth-demo
gatsby-form-example
« 1 2 3 »


netlify
Sites
About
Documentation
info@mathias-biilmann.net
NETLIFY-CMS-WWW
ALL SITES
Settings
Builds
Access
Notifications
SSL
Upgrade
netlifycms
Docs
Contributing
Community
GET STARTED
Open source content management for your Git workflow
Use Netlify CMS with any static site generator for a faster and more flexible web project
Static + content management = ♥
Get the speed, security, and scalability of a static site, while still providing a convenient editing
Name: netlify-cms-www edit
Domain: www.netlifycms.org edit
Privacy: Public edit
Link to Git
Settings for continuous deployment from git.
Repository: https://github.com/netlify/netlify-cms
Branch: master
Build Cmd: cd website && yarn install && yarn build
Public folder: website/dist
Edit
Build environment
Set environment variables for your build script.
No environment variables
Edit
Custom Scripts
Inject analytics or other scripts into the html of your site.
Google Analytics
injected before </body>
View
Remove
Add
Post Processing
Control the post processing and optimizations netlify can do for you.
All processing disabled
Edit
Prerendering
Enable prerendering for search engines for single page apps. Read more
Prerendering is not available on your current plan.
Upgrade
Site Info
Current status of the site
API ID: e369d639-07e4-4fba-aac4-1cc9b00112b1
Current State Deployed
Created At 2:30:27 PM
Updated At 12:04:58 AM
Delete


All teams
Search site
New site from Git
www.netlifycms.org
Deploys from GitHub
Owned by Netlify
Last update at 12:04 am (3 minutes ago)
cms-demo
Deploys from GitHub
Owned by Netlify
Last update at 12:04 am (3 minutes ago)
trunews-rss
Deploys from Bitbucket
Owned by Flowing Streams
Last update at 12:00 am (7 minutes ago)
www.smashingmagazine.com
Deploys from GitHub
Owned by Smashing Magazine
Last update on Dec 11 (18 minutes ago)
app
Deploys from GitHub
Owned by Netlify
Last update on Dec 11 (2 hours ago)
storybook
Deploys from GitHub
Owned by Netlify
Last update on Dec 11 (2 hours ago)
smashingcomments
Deploys from GitHub
Owned by Smashing Magazine
Last update on Dec 11 (2 hours ago)
www.netlify.com
Deploys from GitHub
Owned by Netlify
Last update on Dec 11 (6 hours ago)
trunews-archived-articles-etc
Deploys from Bitbucket
Owned by Flowing Streams
Last update on Dec 11 (9 hours ago)
status
Deploys from GitHub
Owned by Netlify
Last update on Dec 11 (12 hours ago)
www.staticgen.com
Deploys from GitHub
Owned by Netlify
Last update on Dec 11 (14 hours ago)
staging.smashingmagazine.com
Deploys from GitHub
Owned by Smashing Magazine
Last update on Dec 11 (15 hours ago)
forklet.com
Manual deploys
Owned by Mathias Biilmann
Last update on Dec 10 (a day ago)
www.timespace.dk
Deploys from GitHub
Owned by Mathias Biilmann
Last update on Dec 10 (a day ago)
codesassy.com
Deploys from GitHub
Owned by Mathias Biilmann
Last update on Dec 10 (a day ago)
Need to share a quick prototype or publish a simple mockup?
Drag a folder with a static site here
« 1 2 3 4 »
Docs Support News Terms
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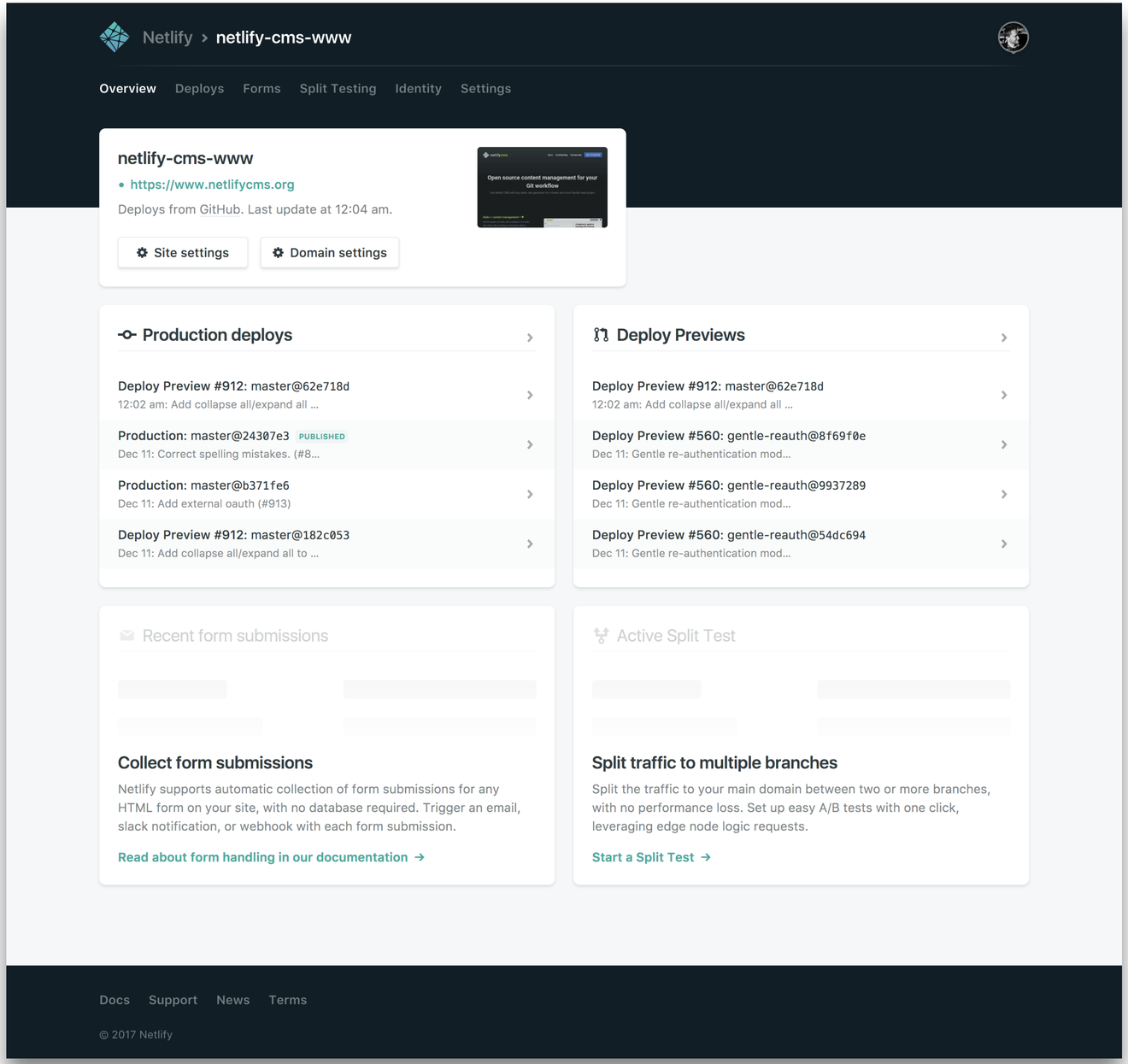
Netlify › netlify-cms-www
Overview Deploys Forms Split Testing Identity Settings
netlify-cms-www
https://www.netlifycms.org
Deploys from GitHub. Last update at 12:04 am.
Site settings
Domain settings
Production deploys
Deploy Preview #912: master@62e718d
12:02 am: Add collapse all/expand all ...
Production: master@24307e3 PUBLISHED
Dec 11: Correct spelling mistakes. (#8...
Production: master@b371fe6
Dec 11: Add external oauth (#913)
Deploy Preview #912: master@182c053
Dec 11: Add collapse all/expand all to ...
Deploy Previews
Deploy Preview #912: master@62e718d
12:02 am: Add collapse all/expand all ...
Deploy Preview #560: gentle-reauth@8f69f0e
Dec 11: Gentle re-authentication mod...
Deploy Preview #560: gentle-reauth@9937289
Dec 11: Gentle re-authentication mod...
Deploy Preview #560: gentle-reauth@54dc694
Dec 11: Gentle re-authentication mod...
Recent form submissions
Collect form submissions
Netlify supports automatic collection of form submissions for any HTML form on your site, with no database required. Trigger an email, slack notification, or webhook with each form submission.
Read about form handling in our documentation →
Active Split Test
Split traffic to multiple branches
Split the traffic to your main domain between two or more branches, with no performance loss. Set up easy A/B tests with one click, leveraging edge node logic requests.
Start a Split Test →
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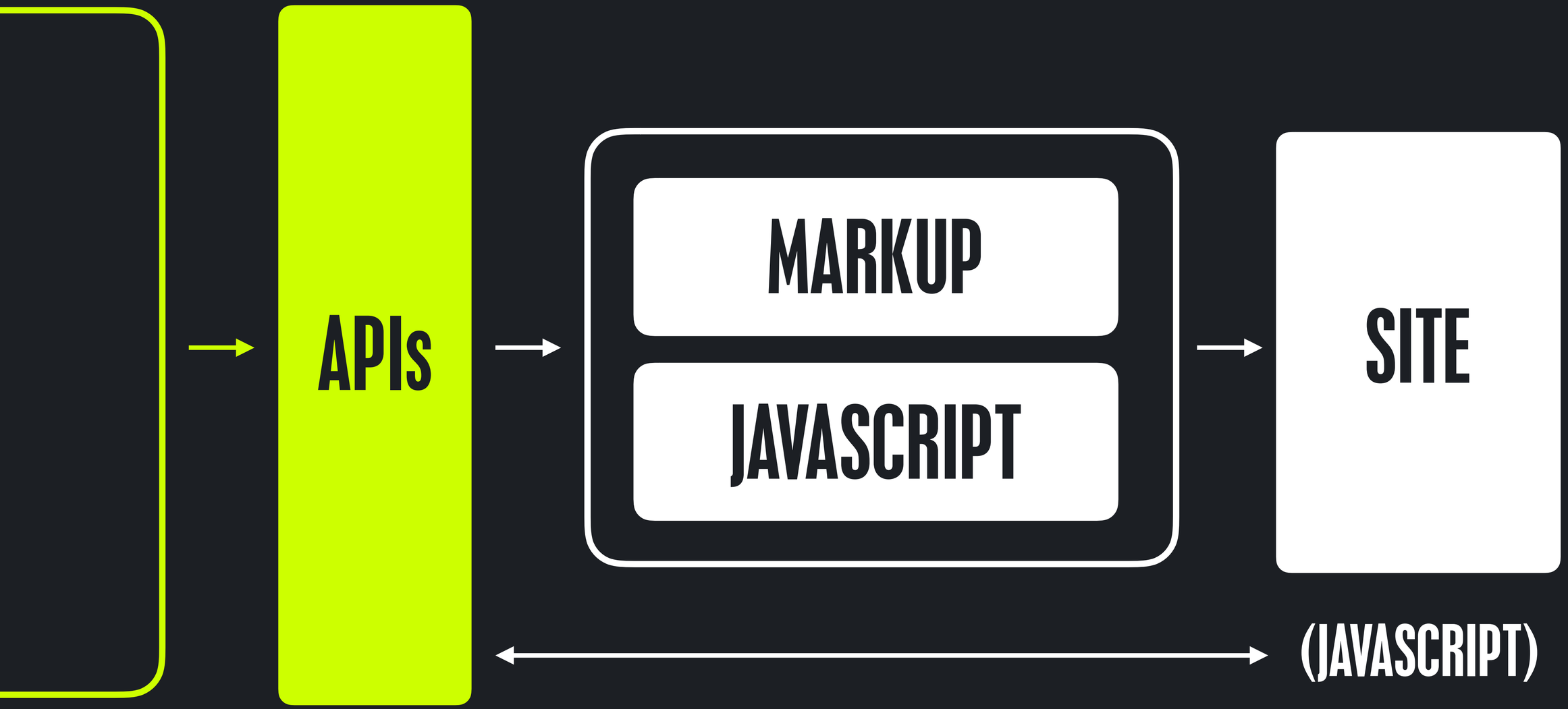
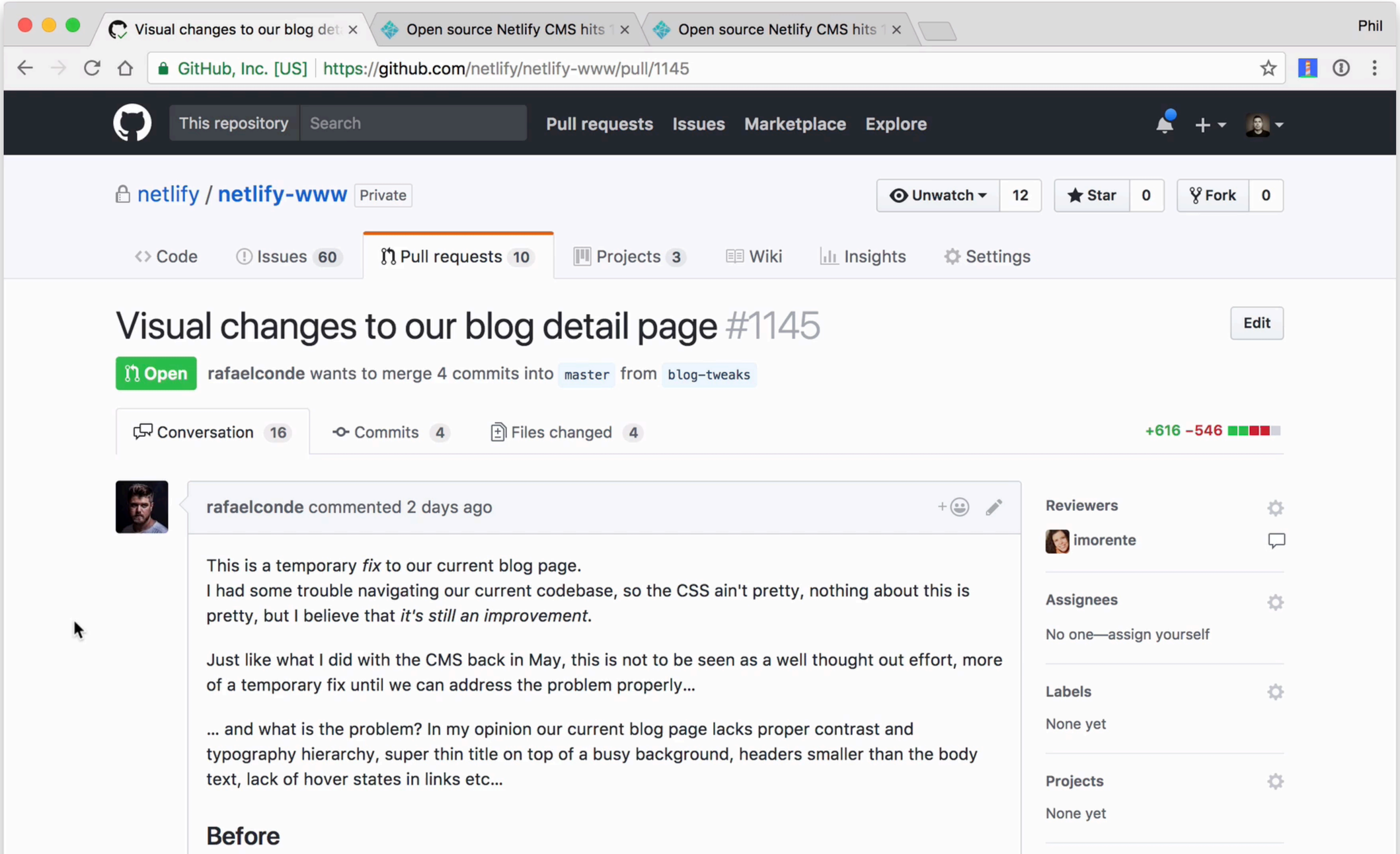

APIs
MARKUP
JAVASCRIPT
SITE
(JAVASCRIPT)

AUTOMATION BASED ON GIT ACTIVITY

GENERATING PREVIEWS FROM PULL REQUESTS

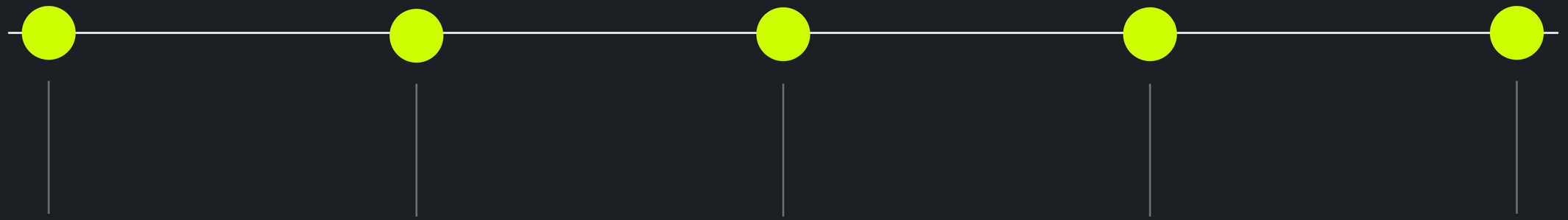

Visual changes to our blog det
Open source Netlify CMS hits 1
Open source Netlify CMS hits 1
Phil
GitHub, Inc. [US] https://github.com/netlify/netlify-www/pull/1145
This repository
Search
Pull requests
Issues
Marketplace
Explore
netlify / netlify-www
Private
Unwatch 12
Star 0
Fork 0
Code
Issues 60
Pull requests 10
Projects 3
Wiki
Insights
Settings
Visual changes to our blog detail page #1145
Edit
Open
rafaelconde wants to merge 4 commits into master from blog-tweaks
Conversation 16
Commits 4
Files changed 4
+616 −546
rafaelconde commented 2 days ago
This is a temporary fix to our current blog page.
I had some trouble navigating our current codebase, so the CSS ain't pretty, nothing about this is pretty, but I believe that it's still an improvement.
Just like what I did with the CMS back in May, this is not to be seen as a well thought out effort, more of a temporary fix until we can address the problem properly...
... and what is the problem? In my opinion our current blog page lacks proper contrast and typography hierarchy, super thin title on top of a busy background, headers smaller than the body text, lack of hover states in links etc...
Before
Reviewers
imorente
Assignees
No one—assign yourself
Labels
None yet
Projects
None yet

CONFIDENCE IN THE FUTURE STATE

VERSION CONTROL SHOULD EXTEND TO YOUR DEPLOYMENTS

PHIL, 20 MINUTES AGO

OUR EVOLVING APPROACH TO INFRASTRUCTURE



ON SITE HARDWARE

SOME RACK SPACE

(not Rackspace)

VIRTUAL SERVER

(perhaps Rackspace)

SOFTWARE AAS

FUNCTIONS AAS

OUR EVOLVING APPROACH TO INFRASTRUCTURE

netlify / create-react-app-lambda

Watch 3 Star 81 Fork 19

Code Issues 1 Pull requests 1 Projects 0 Wiki Insights Settings

No description, website, or topics provided.

Edit

Add topics

9 commits 2 branches 0 releases 2 contributors

Branch: master New pull request Create new file Upload files Find file Clone or download

biilmann Update dependencies — Latest commit 3b5fac5 on Apr 15

public	First commit	6 months ago
src	Add demo of calling a lambda	6 months ago
.gitignore	First commit	6 months ago
README.md	Add deploy button	2 months ago
netlify.toml	Update build dir	6 months ago
package.json	Update dependencies	a month ago
yarn.lock	Update dependencies	a month ago

README.md

A SERVERLESS WORKFLOW *which works*

- 👉 POWERED BY VERSION CONTROL ACTIONS
- 👉 AUTOMATICALLY GENERATING VERSIONED LAMBDAS
- 👉 IMMUTABLE DEPLOYMENTS
- 👉 INSTANT PROVISIONING OF UNLIMITED STAGING ENVIRONMENTS

Lessons

EMBRACING VERSION CONTROL CONVENTIONS REMOVES NEED TO REINVENT THEM

REDUCED FRICTION BRINGS AGILITY AND CONFIDENCE

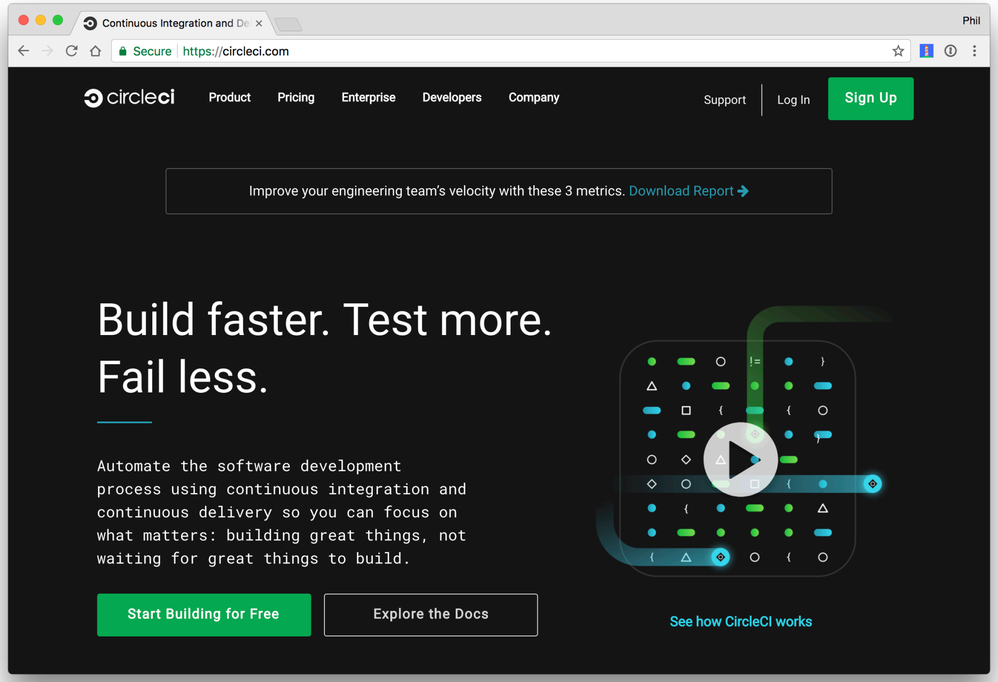
JAMSTACK GOES BEYOND STATIC SITES

FOR THE NEXT 40 MINUTES OR SO

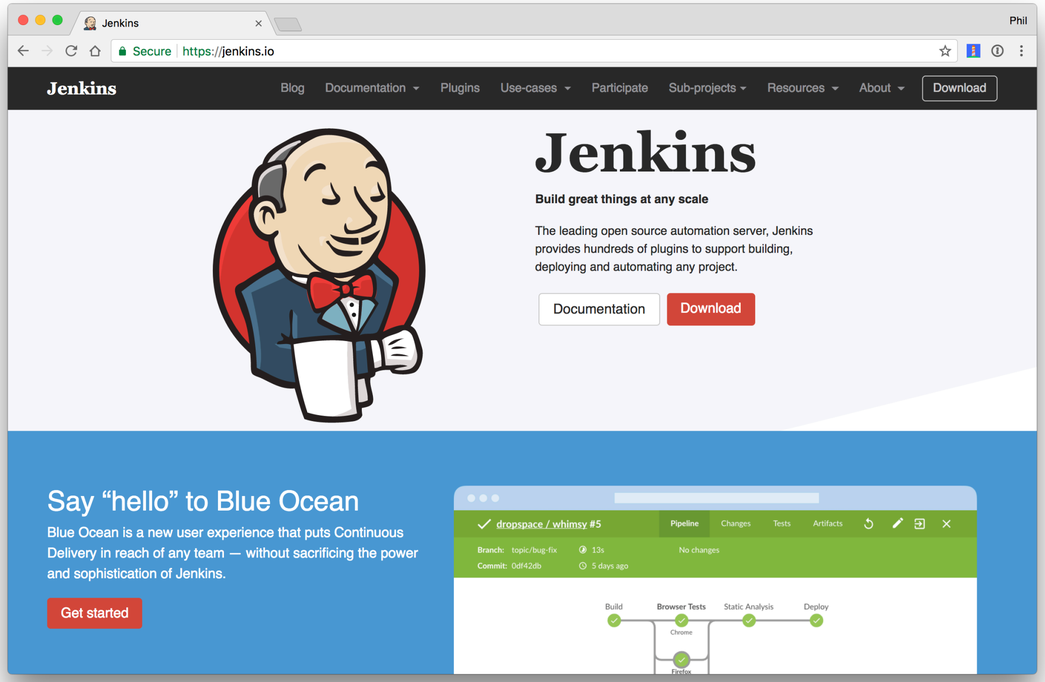
/ WHERE DOES IT HURT?
/ 3 STORIES
/ MINDSETS AND RESOURCES

RESOURCES

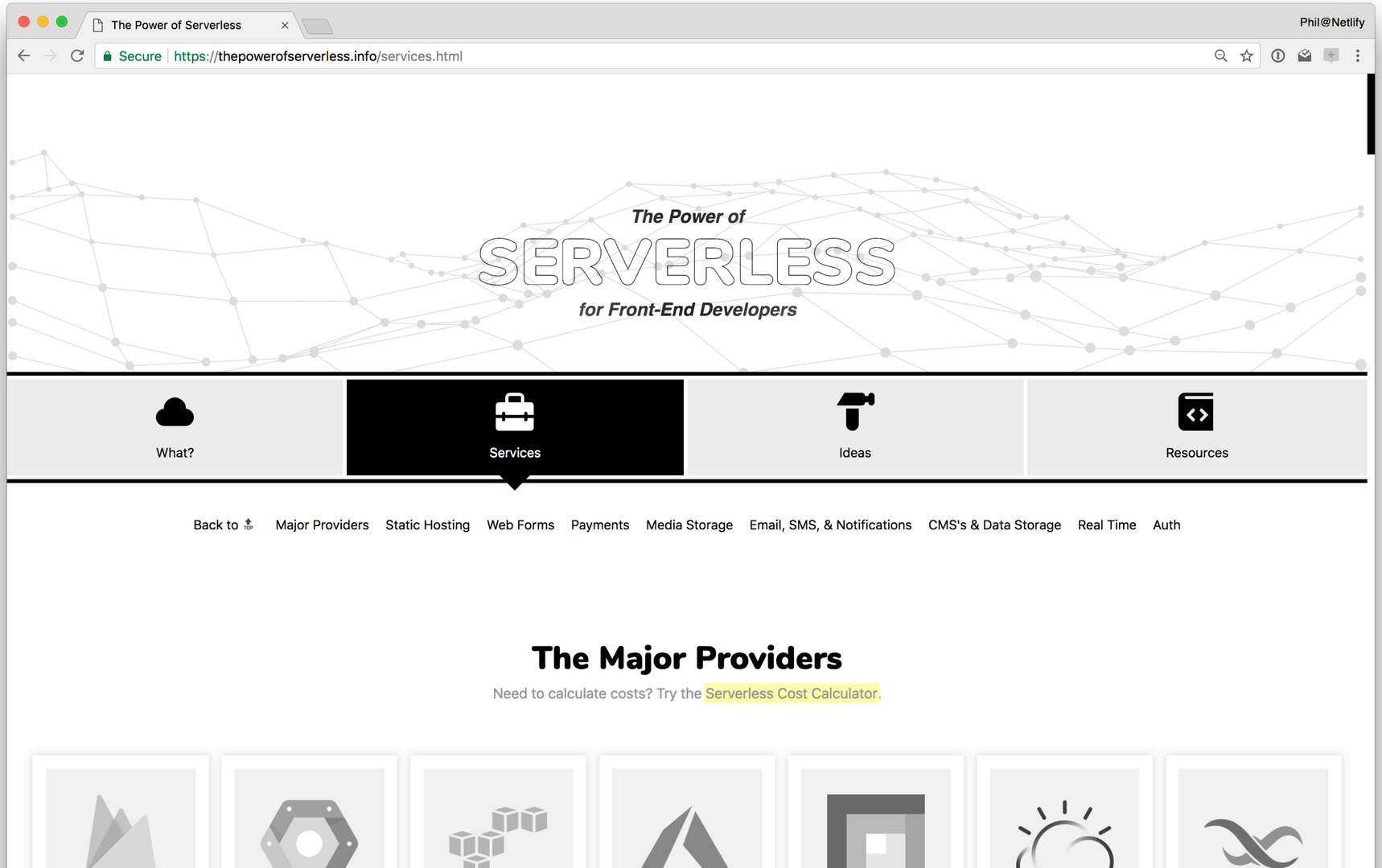
CIRCLE CI



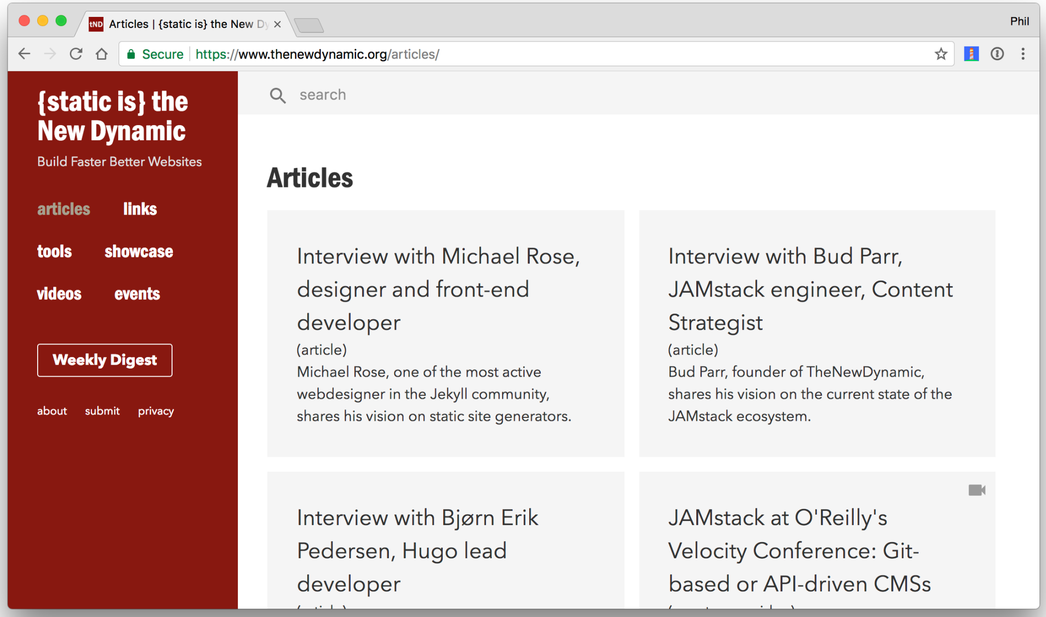
JENKINS



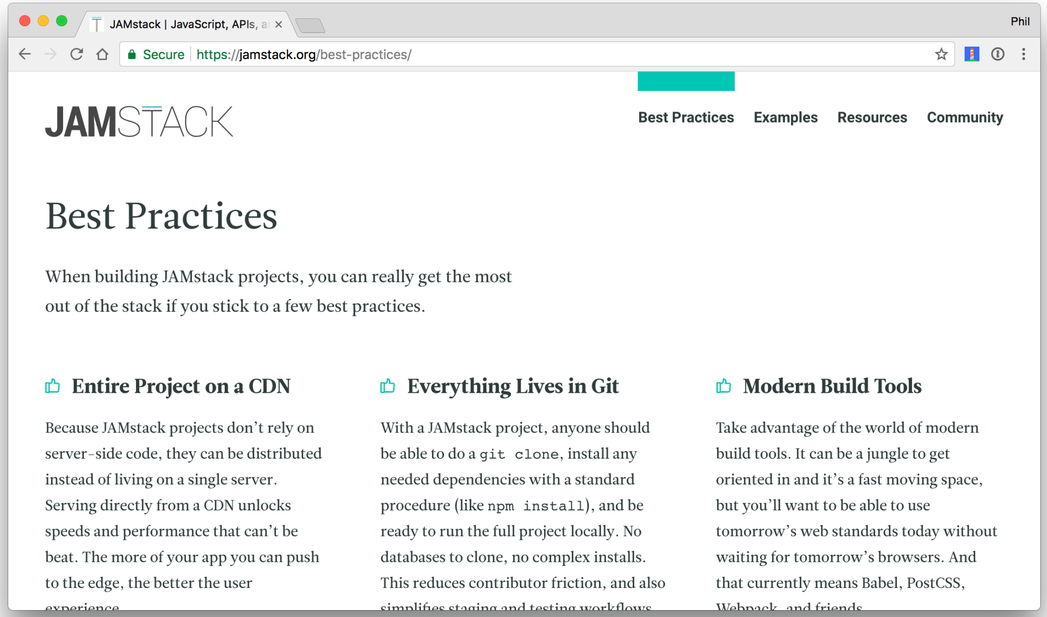
THEPOWEROFSERVERLESS.INFO



THENEWDYNAMIC.ORG



JAMSTACK.ORG



MINDSETS

VERSION CONTROL *For* EVERYTHING

A NOTE ON DEPLOYMENT

1. MAKE IT SCRIPTED
2. MAKE IT AUTOMATED
3. MAKE IT REAL
4. MAKE IT FIRST

EXPECT TIMES OF CHAOS

DON'T LET A POOR PROCESS BE WHAT CREATES IT

A NOTE ON EXPERTISE

IT'S AN AWFULLY FULL STACK

A NOTE ON EXPERTISE

USE THE SKILLS OF OTHERS

HAWKSWORX.COM / TALKS / WAD

THANK YOU

PHIL HAWKSWORTH