

# PROMOTING PERFORMANCE FROM THE GROUND UP

**PHIL HAWKSWORTH**



**HELLO**

@PHILHAWKSWORTH

# REALTIME FINANCIAL DATA

# REALTIME FINANCIAL DATA





# REALTIME FINANCIAL DATA

# SHIPPING INSURANCE



# SHIPPING INSURANCE



 **R/GA**



■ R/GA



WEB  
CONF  
.ASIA

*Intrinsic Sizing: auto*

The auto-sized track will stretch in the inline direction.

Use justify-content: start to override the stretching behaviour.

```
.grid {  
  display: grid;  
  grid-gap: 10px;  
  grid-template-columns:  
    min-content  
    max-content  
    fit-content(18ch)  
    auto;  
  justify-content: start;  
}
```

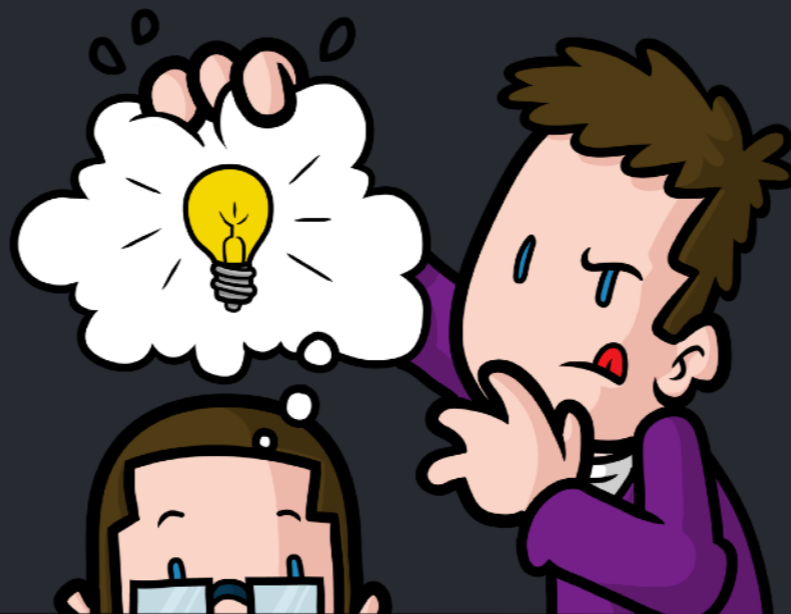


netlify

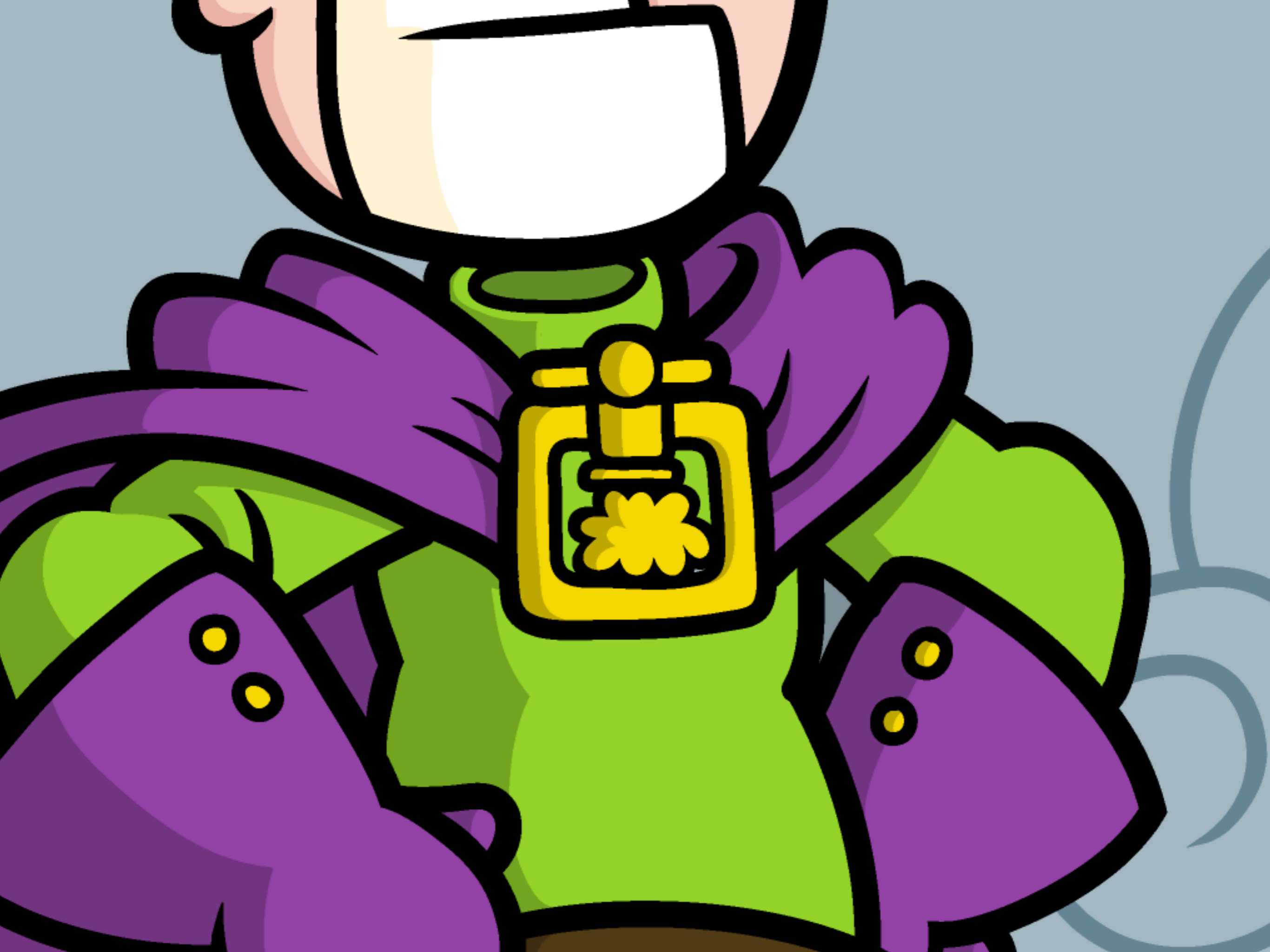
WEB  
CONF  
.ASIA



*the*  
**DREAM  
CRUSHER**











# MAKING THINGS



# MY TRACK RECORD

I CAN SMELL YOUR

CMS



STATIC SITES  
GO ALL HOLLYWOOD

FRONTEERS, AMSTERDAM, 2015



@PHILHAWKSWORTH

@PHILHAWKSWORTH

# SO, FOR THIS TALK

# TIME TO JAZZ IT UP

# PROMOTING PERFORMANCE FROM THE GROUND UP

**PHIL HAWKSWORTH**

**MAKING  
PLATFORMS &  
PROCESSES  
PROMOTE  
PERFORMANCE**

**PHIL HAWKSWORTH**

**MAKING  
PLATFORMS &  
PROCESSES  
PROMOTE  
PERFORMANCE**

**PHIL HAWKSWORTH**



# EXOTIC OR NEW

# FUNDAMENTALS

# WE LEARN A LOT AT CONFERENCES

*12 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**



# DESIGNING FOR PERFORMANCE

— Lara Hogan



# DESIGNING INFRASTRUCTURE FOR PERFORMANCE





# DESIGNING DEPLOYMENTS INFRASTRUCTURE FOR PERFORMANCE



**DESIGNING PROCESSES**  
**DEPLOYMENTS**  
**INFRASTRUCTURE**  
**FOR PERFORMANCE**



**DESIGNING MINDSET**  
**PROCESSES**  
**DEPLOYMENTS**  
**INFRASTRUCTURE**  
**FOR PERFORMANCE**

# MINDSET



# PROCESSES





**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 ~~PERFECT~~ PROJECT TIMELINE



# LAUNCH DAY



# **NEWSFLASH** **PROJECTS CAN BE HARD**

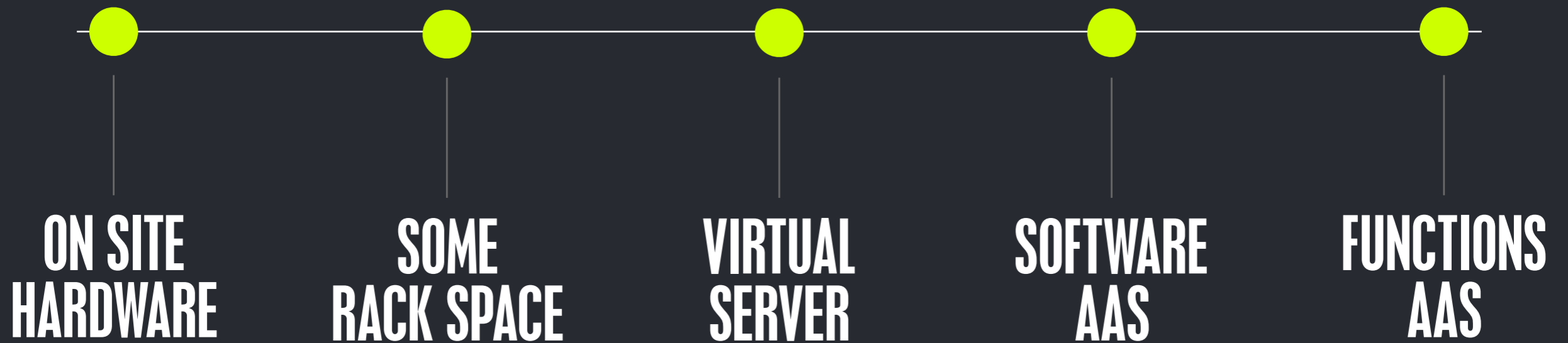
# PROJECTS USUALLY INVOLVE LEARNING

# PROJECTS USUALLY INVOLVE CHANGE



# INFRASTRUCTURE

# OUR EVOLVING APPROACH TO INFRASTRUCTURE



# NEW DEPLOYMENT CONVENTIONS

# APPROACH



# **THIS IS WHERE IT HURTS** **MANAGING CHANGE / UNKNOWNABLE**

**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 NATIONWIDE HEALTHCARE SITE

**IT SHOULD HAVE  
GONE LIVE  
ON FRIDAY**

**MY NEW BOSS**



**CAN YOU HELP THE TEAM  
FIGURE OUT  
THE DEPLOYMENT?**

**MY NEW BOSS**

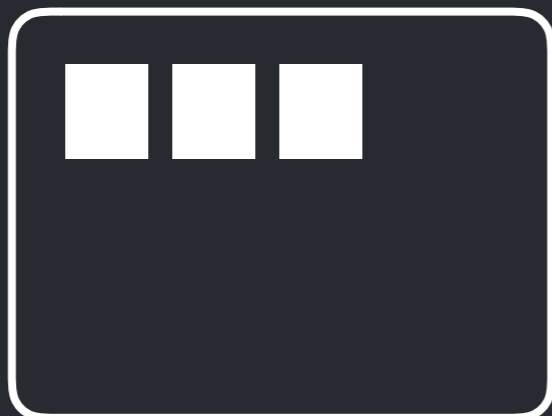
# THE ~~PERFECT~~ PROJECT TIMELINE

“FIGURE OUT” DEPLOYMENT



# THE DEPLOYMENT

**STAGING**



**PROD**



**BOB**



**ALICE**



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 FOR SURE**

**HOW DID THE NEXT  
DEPLOYMENT GO?**

**DO YOU NEED A HUG?**

**I'M NOT READY TO  
TALK ABOUT THAT**

**YES. YES I DO**

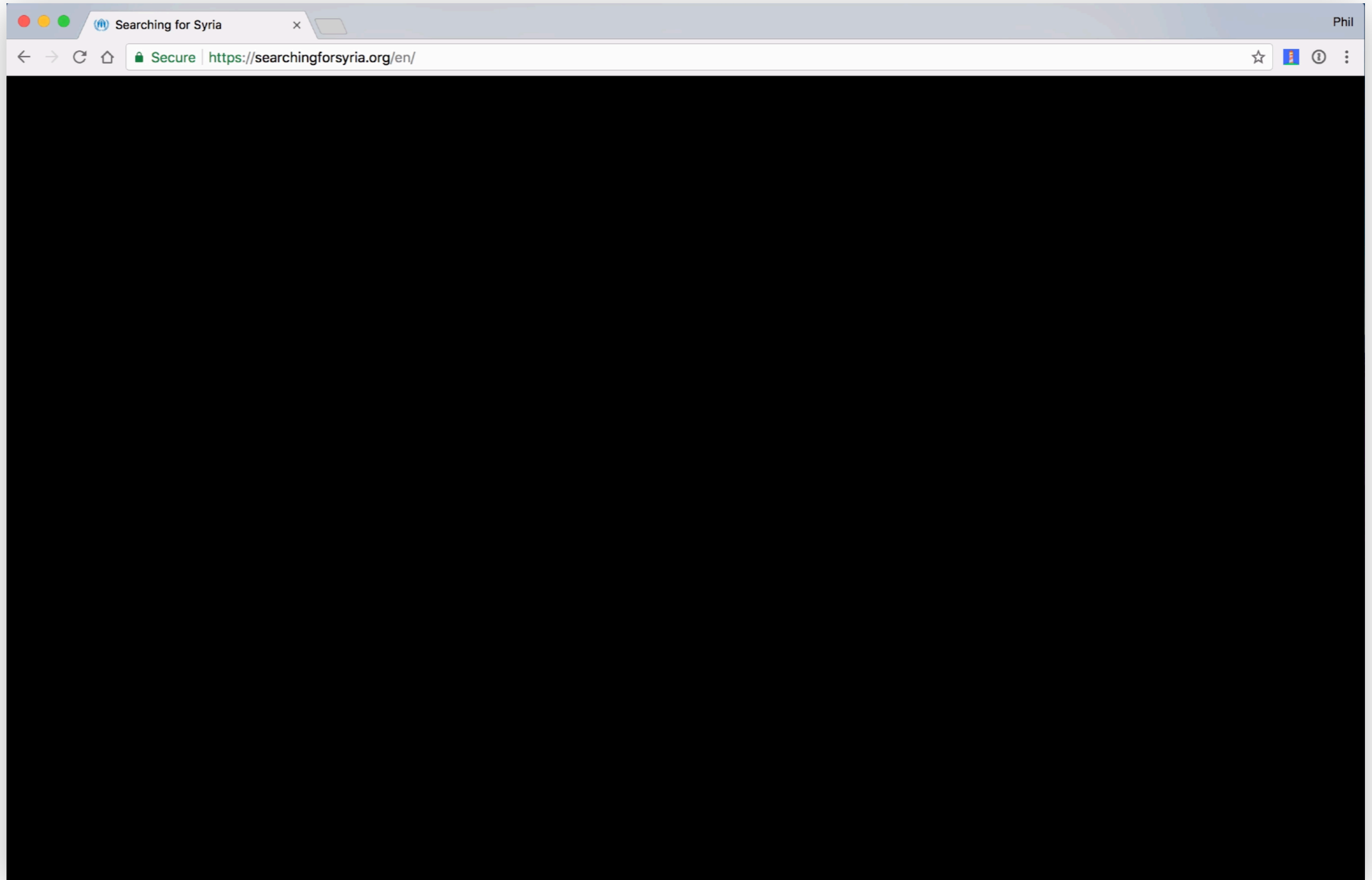
# *Lessons*

**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**



# LOTS OF CHANGE



# SIGNIFICANT POLITICAL SENSITIVITY

# **GREATER STAKEHOLDER DIVERSITY**

# A GLOBAL LAUNCH

# THE ~~PERFECT~~ PROJECT TIMELINE

“FIGURE OUT” DEPLOYMENT





# 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

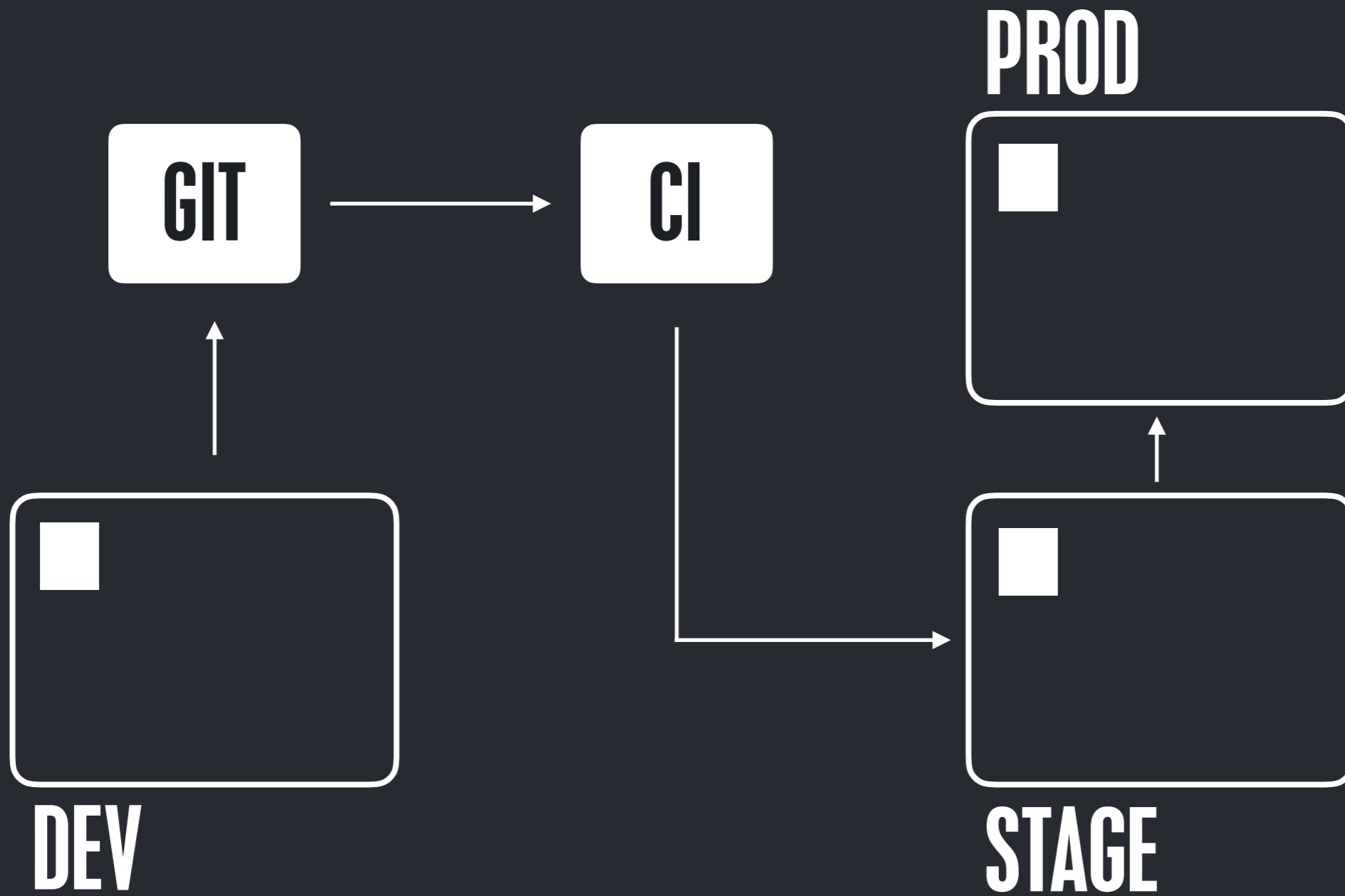


**AITCH TEE TEE PEE  
DOUBLE MEH**

**ALEX SEXTON**

<http://webconf.asia>

# TAGS SHOULD CREATE RESOURCES AT URLS



Google Cloud Platform

App Engine

Dashboard

Services

Versions

Instances

Task queues

Security scans

Quotas

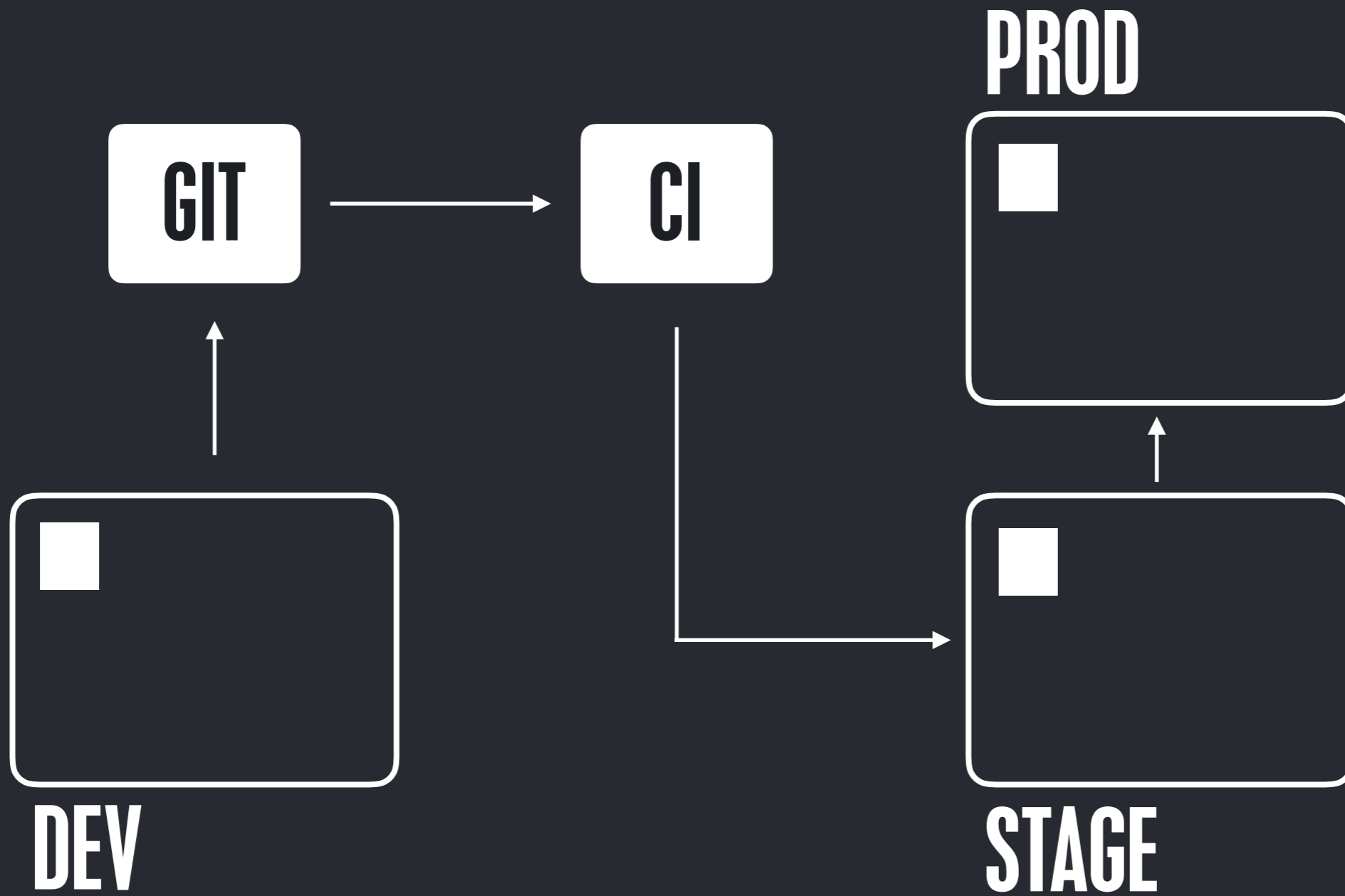
Blobstore

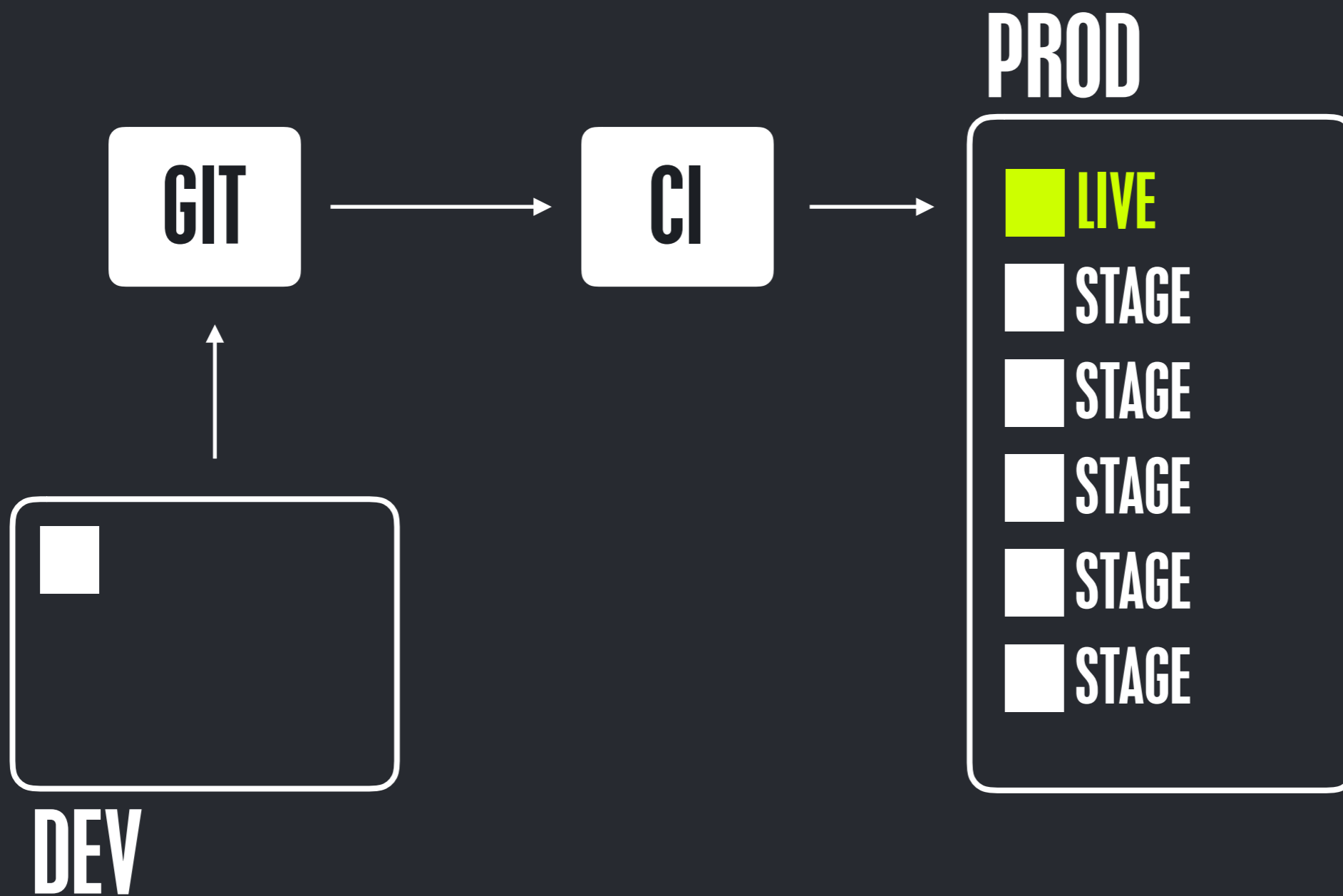
Memcache

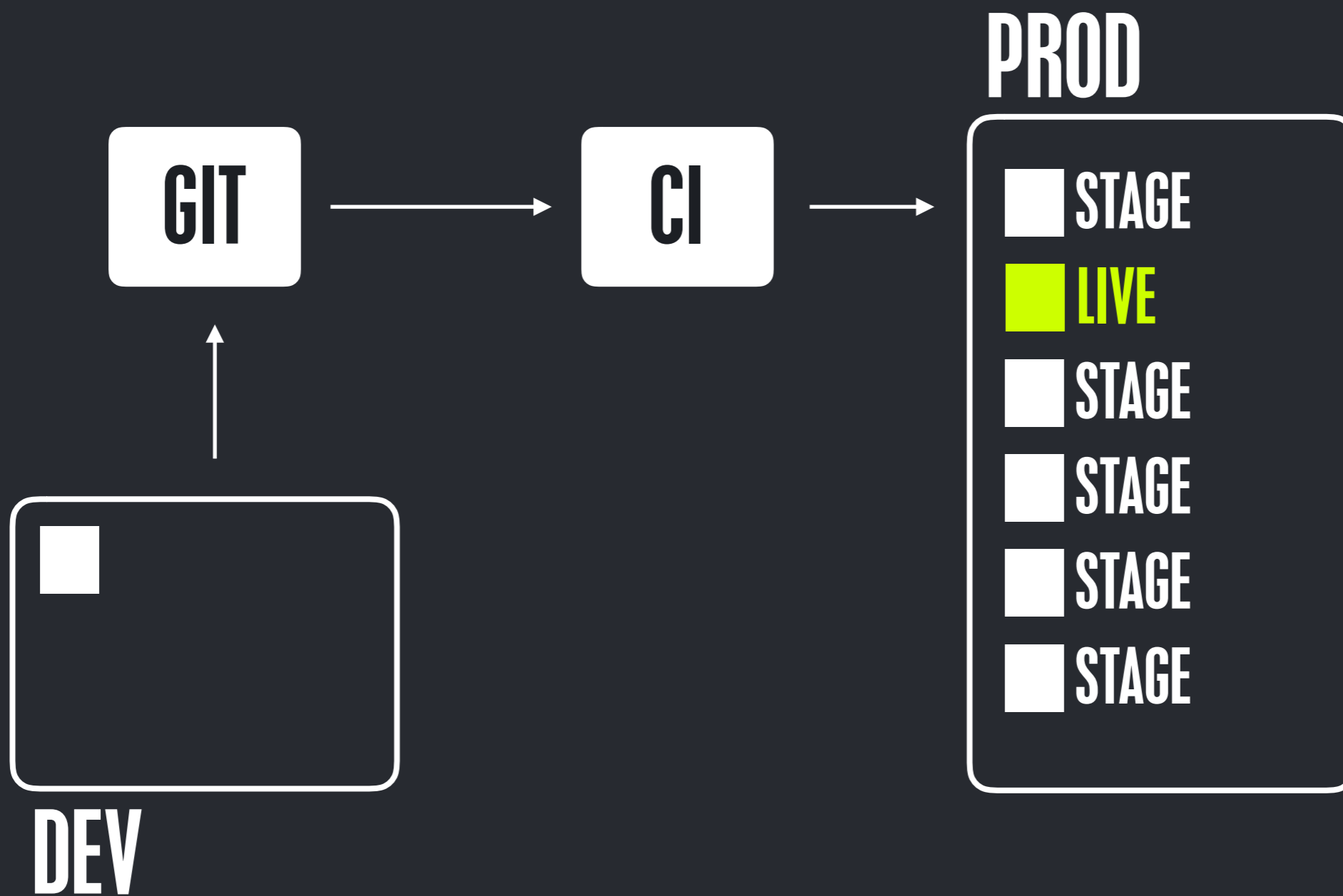
Search

Settings

<input type="checkbox"/>	Version		Status	Traffic Allocation
<input type="checkbox"/>	20160526t201049	<a href="#">↗</a>	Serving	<div style="width: 100%;"><div style="width: 100%;"></div></div> 100%
<input type="checkbox"/>	20160526t193413	<a href="#">↗</a>	Stopped	N/A
<input type="checkbox"/>	20160525t164620	<a href="#">↗</a>	Stopped	N/A
<input type="checkbox"/>	20160525t161638	<a href="#">↗</a>	Stopped	N/A









**DEMOS / DISCUSSIONS  
TESTS / ISSUES / SIGN OFF**

**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 x

Secure <https://www.netlify.com>

Phil@Netlify

netlify Features Pricing Docs Blog Q

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.

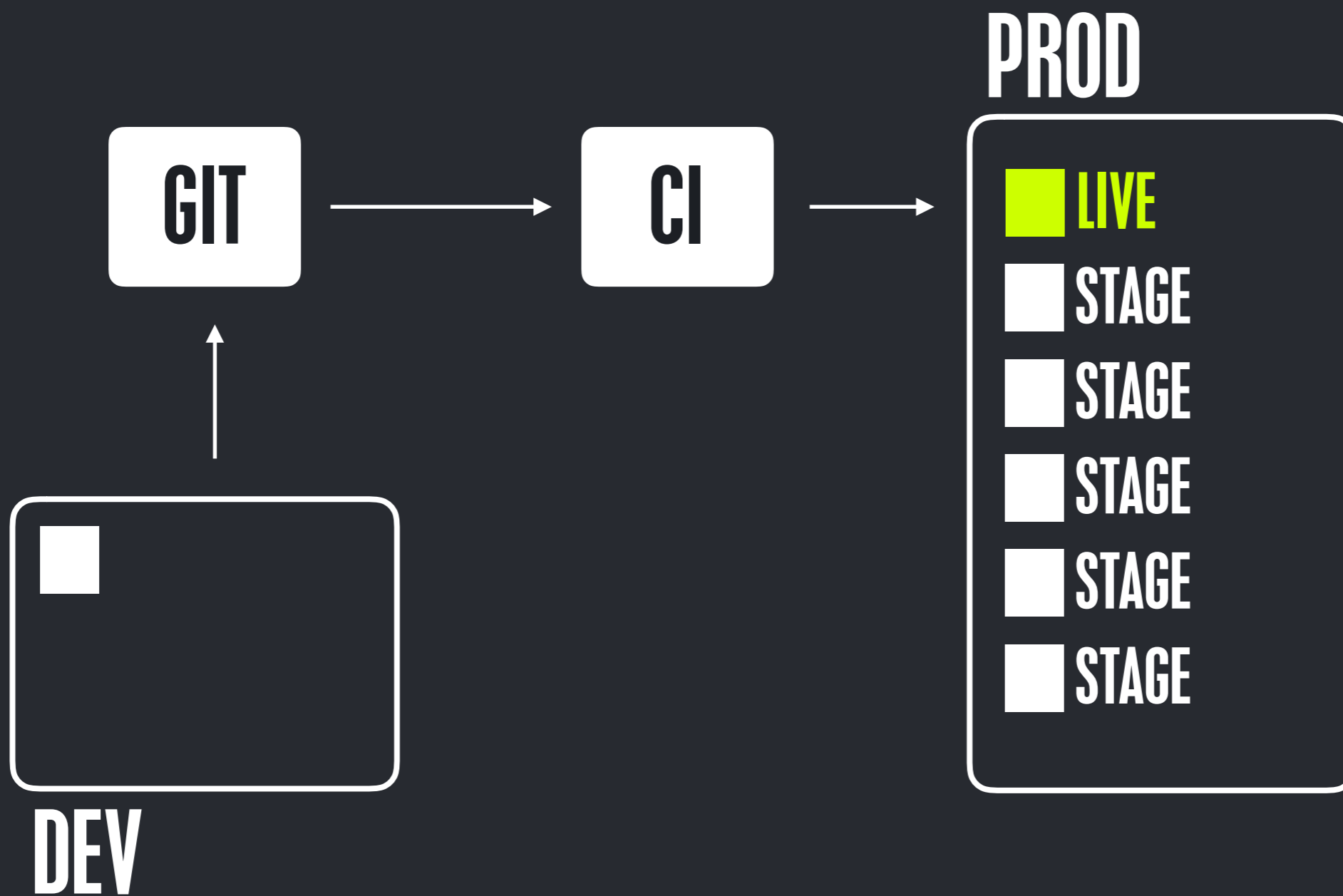
Get started for free

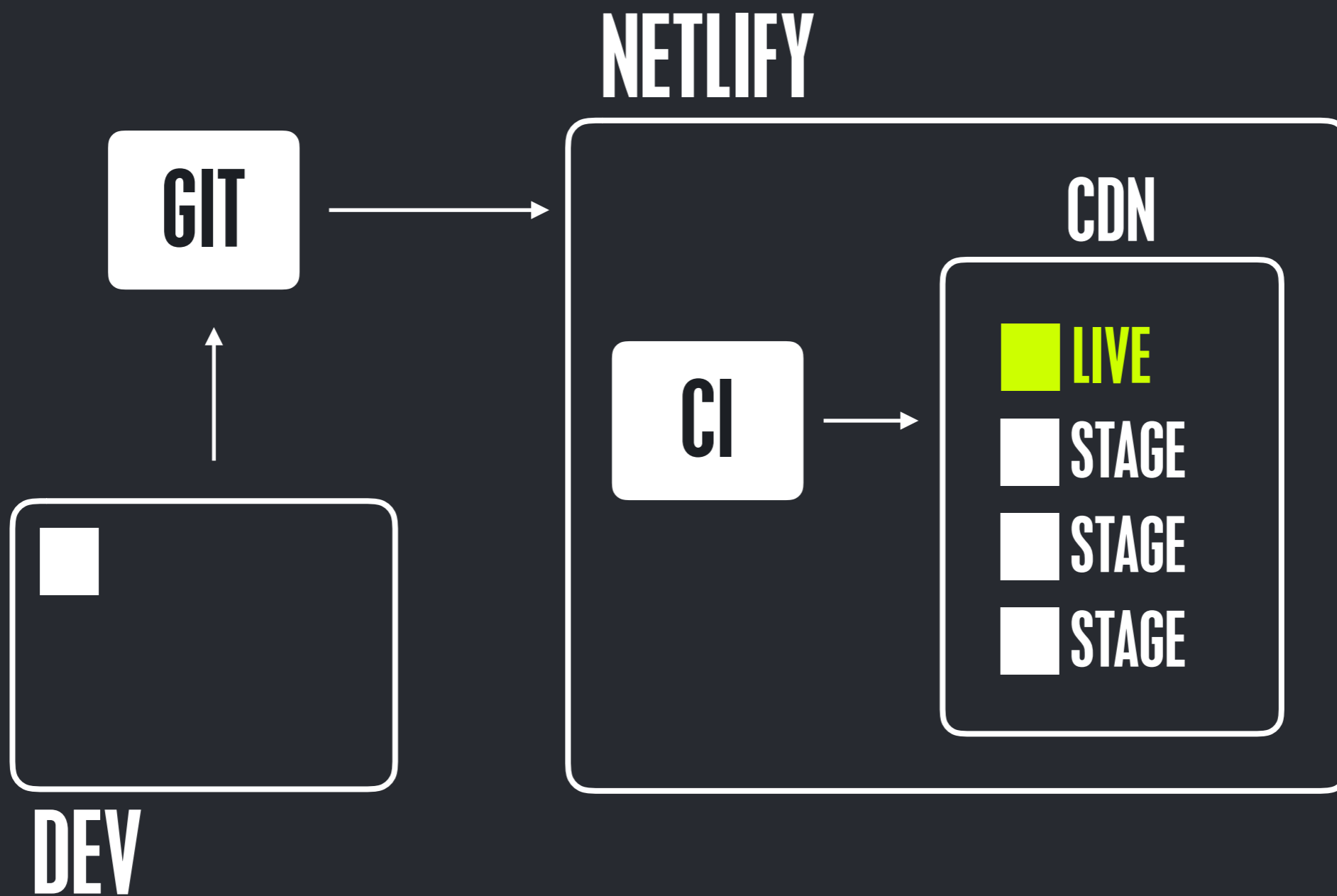
## Deploy your site in seconds\*

- 1 Connect your repository**
  - GitHub
  - GitLab
- 2 Add your build settings**
  - Branch: master ✓
  - Command: yarn build ✓
  - Directory:
- 3 Deploy your website**
  - 2:30:40 PM git clone git@github
  - 2:30:40 PM Preparing Git Repo
  - 2:30:40 PM Starting to deploy
  - 2:30:40 PM Starting post pro
  - 2:30:41 PM Post processing



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



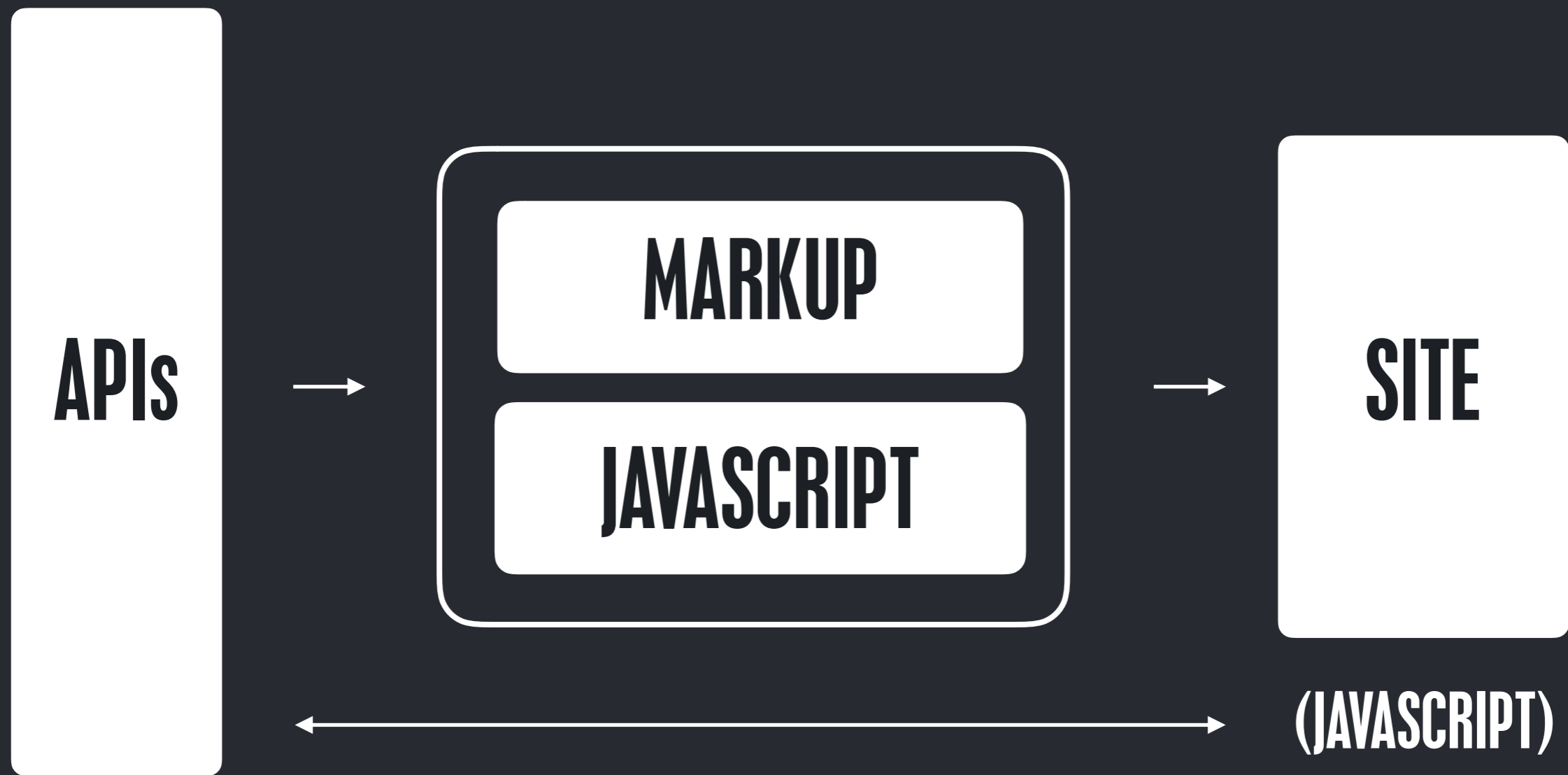


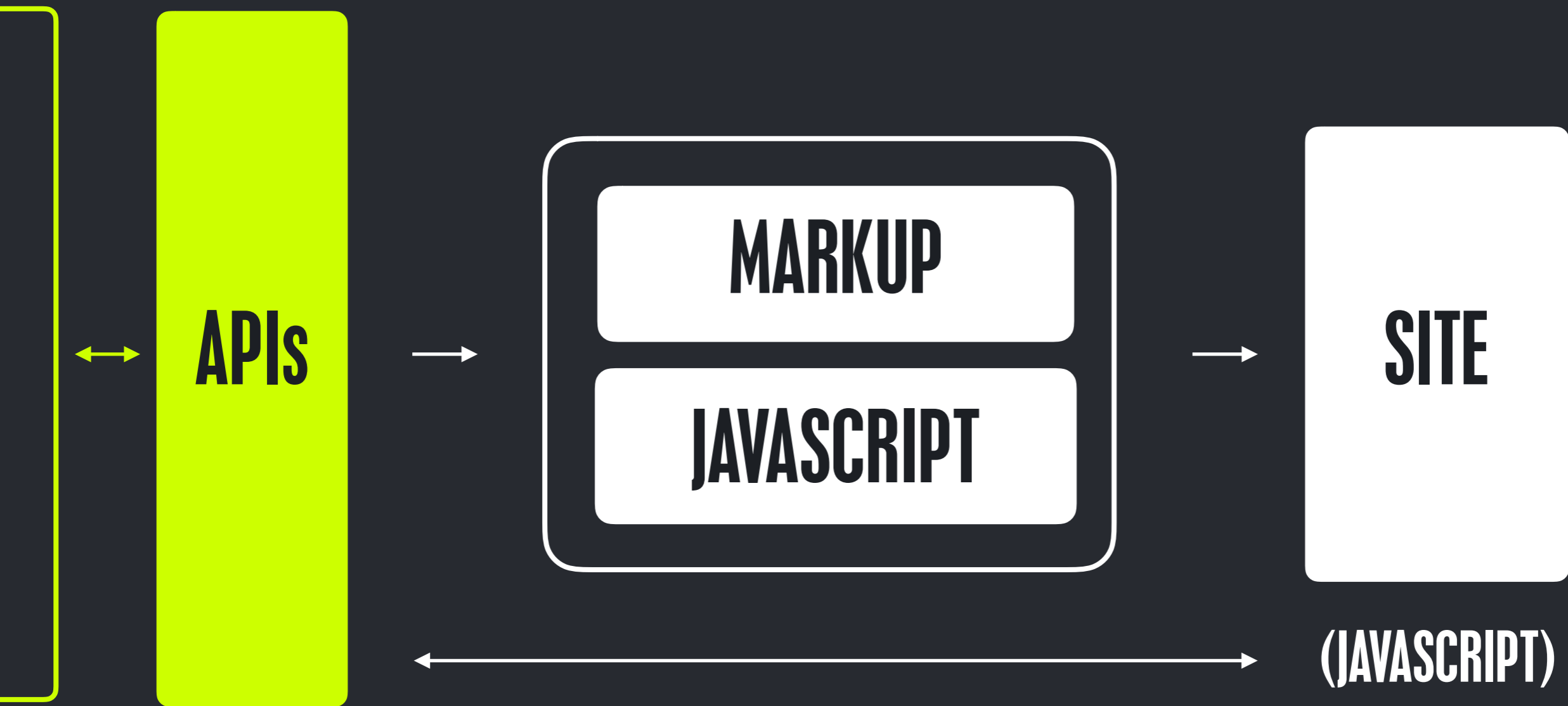
# A GIT-BASED WORKFLOW ALL THE WAY TO PRODUCTION



# *jamstack*

**JAVASCRIPT / API / MARKUP**



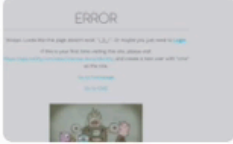




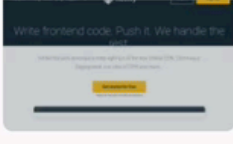


**BUILDS ARE BASED  
ON GIT COMMITS,  
SO WE HAVE HISTORY**

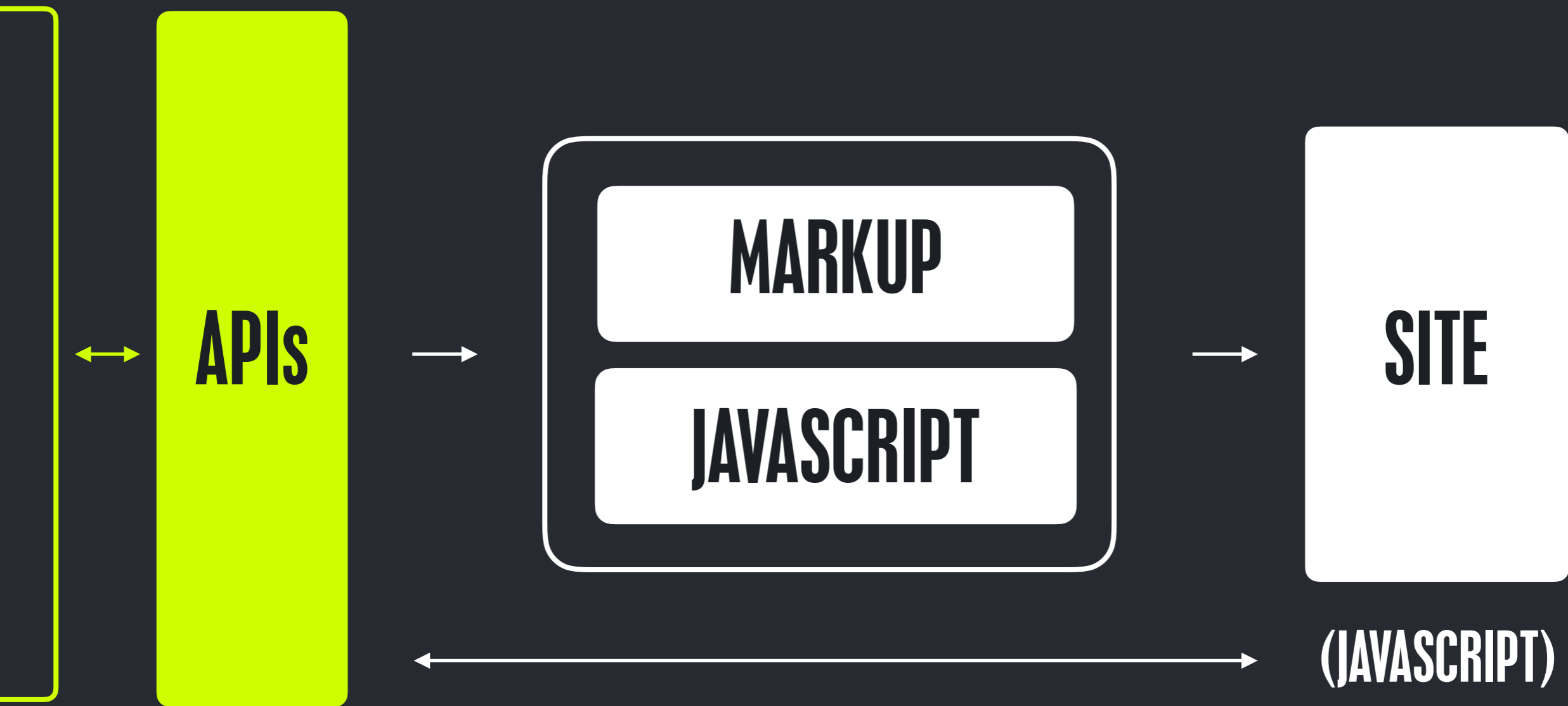


- Sites
- DNS zones
- Members
- Audit Log
- Team settings

New site from Git

	<b>internal-docs</b> Deploys from <a href="#">GitHub</a>	Owned by Netlify Last update at 4:31 am (8 hours ago)	>
	<b>storybook</b> Deploys from <a href="#">GitHub</a>	Owned by Netlify Last update at 2:35 am (10 hours ago)	>
	<b>app</b> Deploys from <a href="#">GitHub</a>	Owned by Netlify Last update at 2:35 am (10 hours ago)	>
	<b>func-it-up</b> Deploys from <a href="#">GitHub</a>	Owned by Netlify Last update at 1:12 am (11 hours ago)	>
	<b>www.staticgen.com</b> Deploys from <a href="#">GitHub</a>	Owned by Netlify Last update at 12:25 am (12 hours ago)	>
	<b>www.netlify.com</b> Deploys from <a href="#">GitHub</a>	Owned by Netlify Last update on Jan 18 (12 hours ago)	>





All teams ▾

Search site  [New site from Git](#)

Site	Source	Owner	Last Update
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 Billmann	Last update on Dec 10 (a day ago)
www.timespace.dk	Deploys from GitHub	Owned by Mathias Billmann	Last update on Dec 10 (a day ago)
codesassy.com	Deploys from GitHub	Owned by Mathias Billmann	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  
© 2017 Netlify

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 →](#)

Docs Support News Terms  
© 2017 Netlify

The screenshot shows the Netlify dashboard with two main sections: 'Your Sites' and 'Guest Sites'. Each section contains a grid of site cards. The 'Your Sites' section has a 'NEW SITE' button and a grid of 15 site cards, each with a preview image and a name. The 'Guest Sites' section has a grid of 12 site cards, also with preview images and names. Navigation arrows are visible at the bottom of each grid.

### Your Sites

- NEW SITE
- laughing-raman-bbae6b
- 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

### Guest Sites

- trunews-archived-articles-etc
- trunews-static-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

The screenshot shows the 'Settings' page for a specific site named 'NETLIFY-CMS-WWW'. The page has a dark header with the site name and a navigation bar with 'Settings', 'Builds', 'Access', 'Notifications', 'SSL', and 'Upgrade'. The main content area is divided into several sections, each with a title, a description, and an 'Edit' button. The 'Site Info' section at the bottom includes a 'Delete' button.

## NETLIFY-CMS-WWW

Settings Builds Access Notifications SSL Upgrade

### 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

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> [Edit](#)

Branch: master

Build Cmd: cd website && yarn install && yarn build

Public folder: website/dist

### 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> [Add](#)

[View](#) [Remove](#)

### 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 [Delete](#)

Current State: Deployed

Created At: 2:30:27 PM

Updated At: 12:04:58 AM



Netlify Where your frontend lives Docs info@mathias-bilman.net

### Your Sites

- New site** +
- laughing-raman-bbae8b** laughing-raman-bbae8b.netlify.com  
Free 12/4/17  
Latest Stories
- google-home-test-action** google-home-test-action.netlify.com  
Free 11/28/17
- relaxed-aryabhata-a3c58e** relaxed-aryabhata-a3c58e.netlify.com  
Free 11/21/17  
No Image
- smashing-commerce** smashing-commerce.netlify.com  
Free 11/19/17  
No Image
- lifeguard-canary-50721** lifeguard-canary-50721.netlify.com  
Free 11/12/17  
No Image
- smashing-prod** www.smashingmagazine.com  
Free 11/12/17  
No Image
- sensor-ethel-18601** sensor-ethel-18601.netlify.com  
Free 11/10/17  
No Image
- walter-make-13470** walter-make-13470.netlify.com  
Free 11/6/17  
No Image
- goal-keeper-elvis-10753** goal-keeper-elvis-10753.netlify.com  
Free 11/6/17  
No Image
- chief-executive-officer-lion...** chief-executive-officer-lion-60360.netlify.com  
Free 7/23/17  
No Image

1 2 3 4 5 6 7 8

Netlify 2014

Netlify Where your frontend lives Docs info@mathias-bilman.net

## Free site laughing-raman-bbae8b all sites

Overview Deploys Billing

### 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](#)

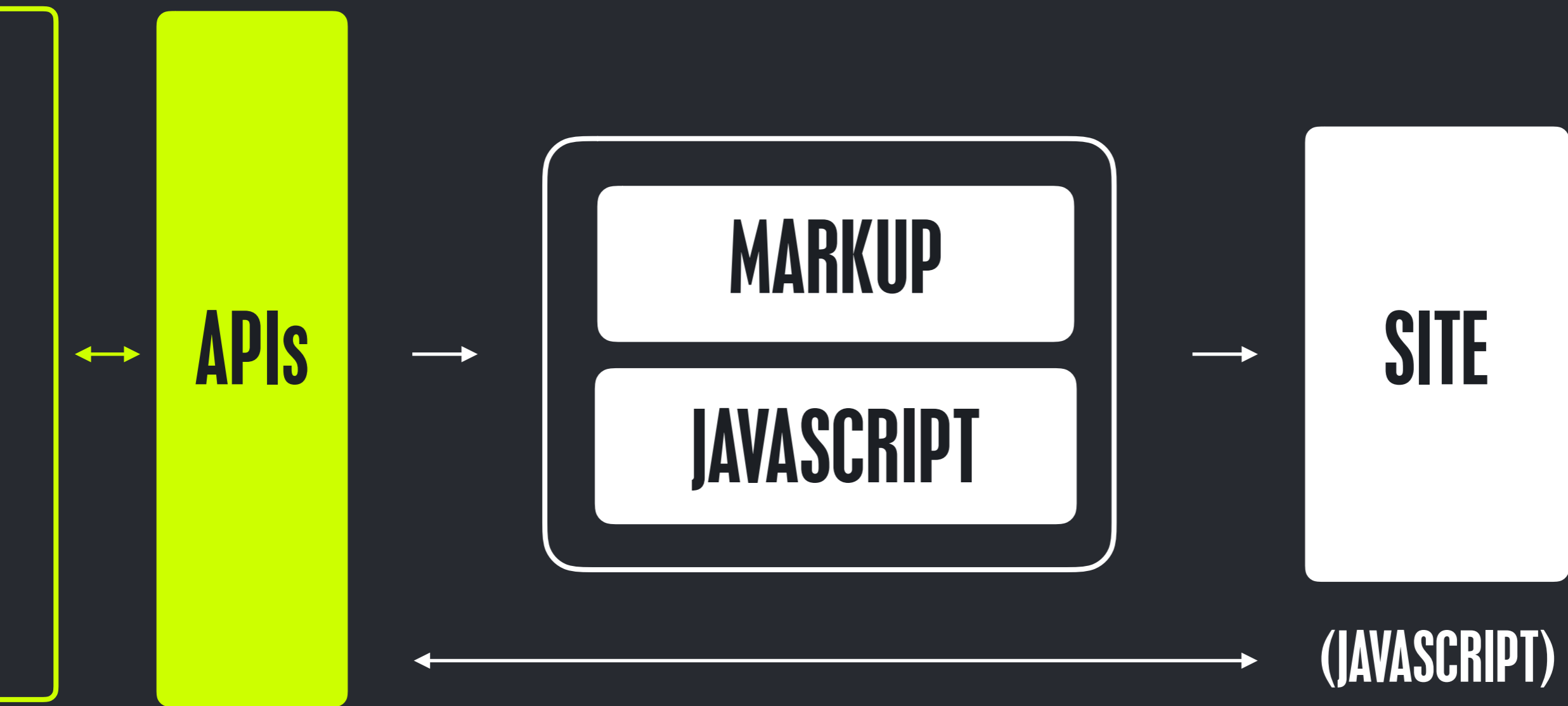
Repository	https://github.com/bilman/gatsby-starter-netlify-cms
Branch	master
Build Command	gatsby build
Folder to deploy	public/

[Delete site](#)

#### 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](#)

Netlify 2014



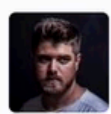
# AUTOMATION BASED ON GIT ACTIVITY

# GENERATING PREVIEWS FROM PULL REQUESTS

# Visual changes to our blog detail page #1145 Edit

**Open** rafaalconde wants to merge 4 commits into master from blog-tweaks

Conversation 16 Commits 4 Files changed 4 +616 -546



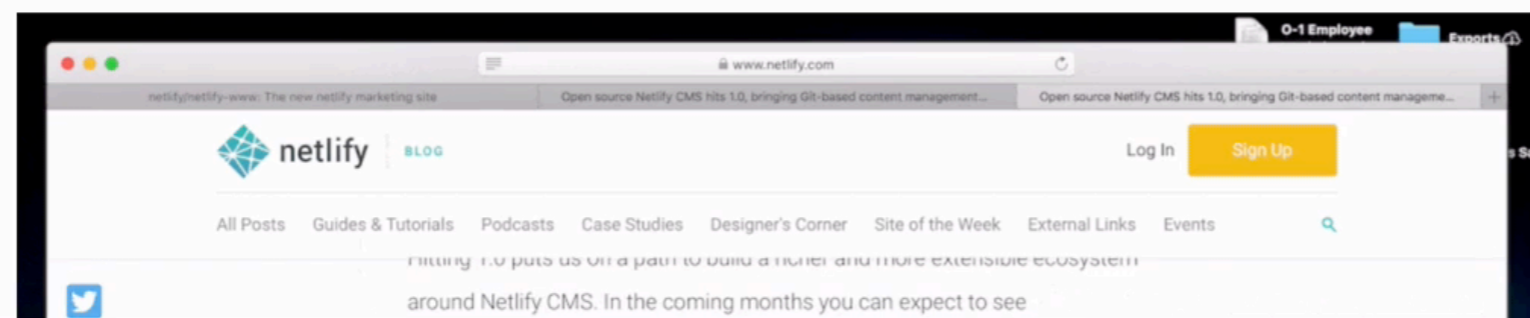
rafaalconde commented 2 days ago

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** Settings

imorente Comment

---

**Assignees** Settings

No one—assign yourself

---

**Labels** Settings

None yet

---

**Projects** Settings

None yet

---

**Milestone** Settings

No milestone

---

**Notifications**

Unsubscribe

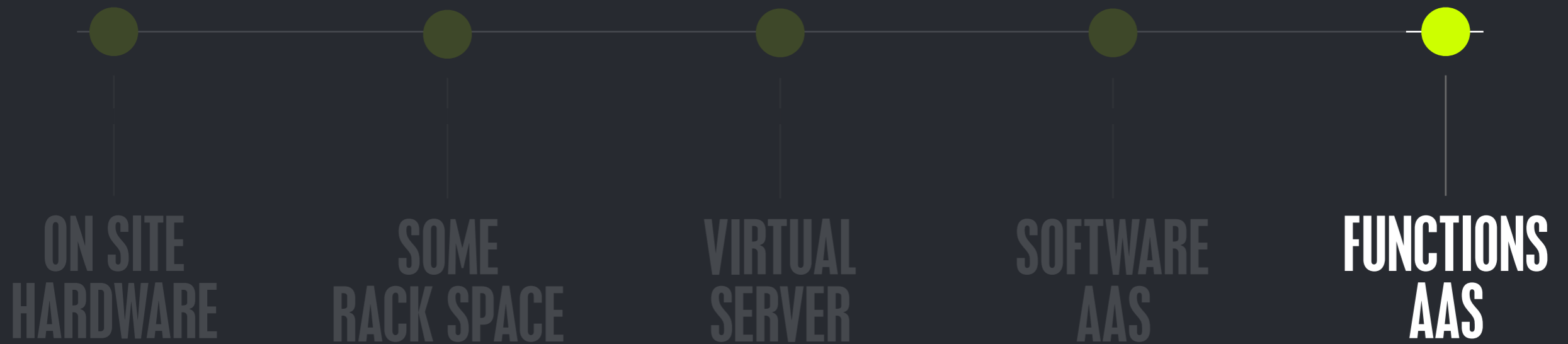
You're receiving notifications

# CONFIDENCE IN THE FUTURE STATE

**VERSION CONTROL SHOULD  
EXTEND TO YOUR DEPLOYMENTS**

**PHIL, 20 MINUTES AGO**

# OUR EVOLVING APPROACH TO INFRASTRUCTURE







No description, website, or topics provided. Add topics Edit

9 commits 2 branches 0 releases 2 contributors

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

Table with 4 columns: File/Folder Name, Commit Message, Commit Hash, and Date. Rows include public, src, .gitignore, README.md, netlify.toml, package.json, and yarn.lock.

README.md

This project is based on Create React App. (For more information about Create react App, check their full documentation.)

# A SERVERLESS WORKFLOW

- ✓ POWERED BY VERSION CONTROL ACTIONS
- ✓ AUTOMATICALLY GENERATING VERSIONED LAMBDA S
- ✓ IMMUTABLE DEPLOYMENTS
- ✓ INSTANT PROVISIONING OF 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**

# CIRCLE CI

Continuous Integration and Delivery

Secure | <https://circleci.com>

circleci Product Pricing Enterprise Developers Company Support Log In [Sign Up](#)

Improve your engineering team's velocity with these 3 metrics. [Download Report](#) →

## Build faster. Test more. Fail less.


Automate the software development process using continuous integration and continuous delivery so you can focus on what matters: building great things, not waiting for great things to build.

[Start Building for Free](#) [Explore the Docs](#) [See how CircleCI works](#)

# JENKINS

Jenkins

Blog Documentation Plugins Use-cases Participate Sub-projects Resources About [Download](#)



## Jenkins

Build great things at any scale

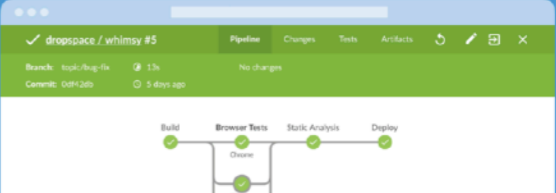
The leading open source automation server, Jenkins provides hundreds of plugins to support building, deploying and automating any project.

[Documentation](#) [Download](#)

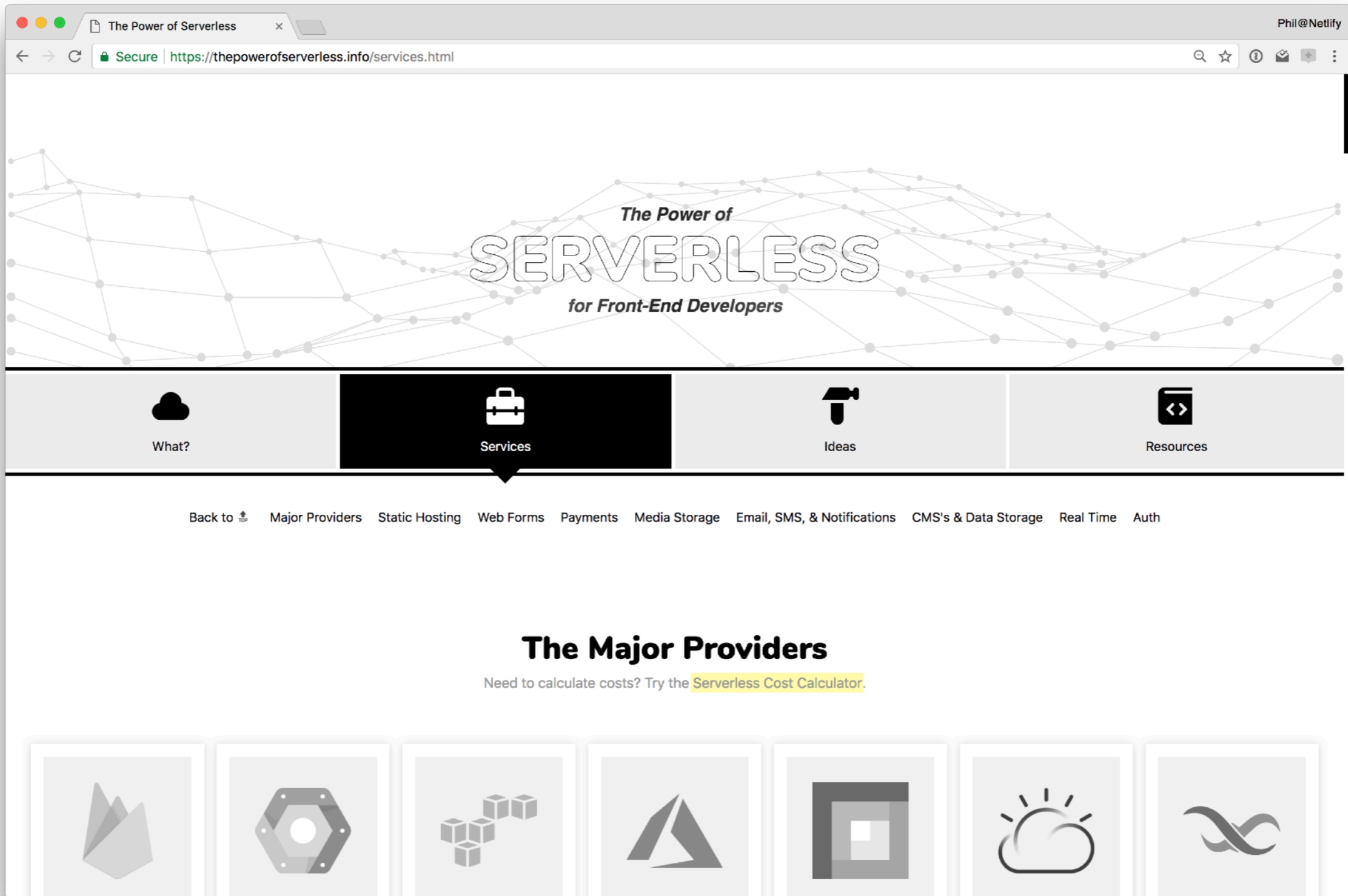
### Say "hello" to Blue Ocean

Blue Ocean is a new user experience that puts Continuous Delivery in reach of any team — without sacrificing the power and sophistication of Jenkins.

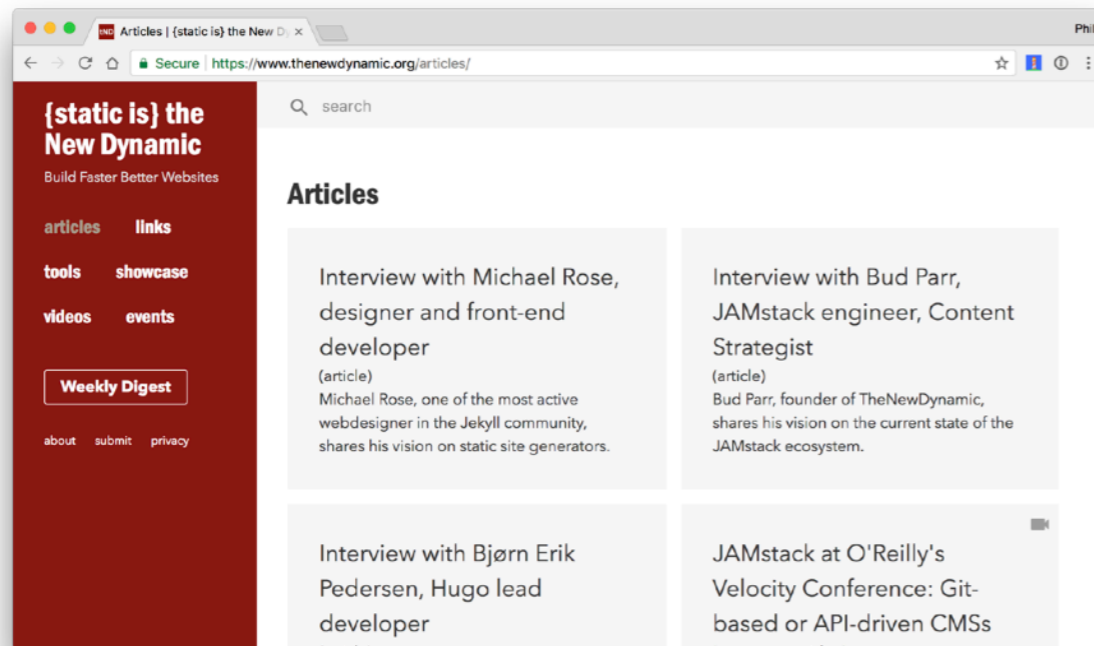
[Get started](#)



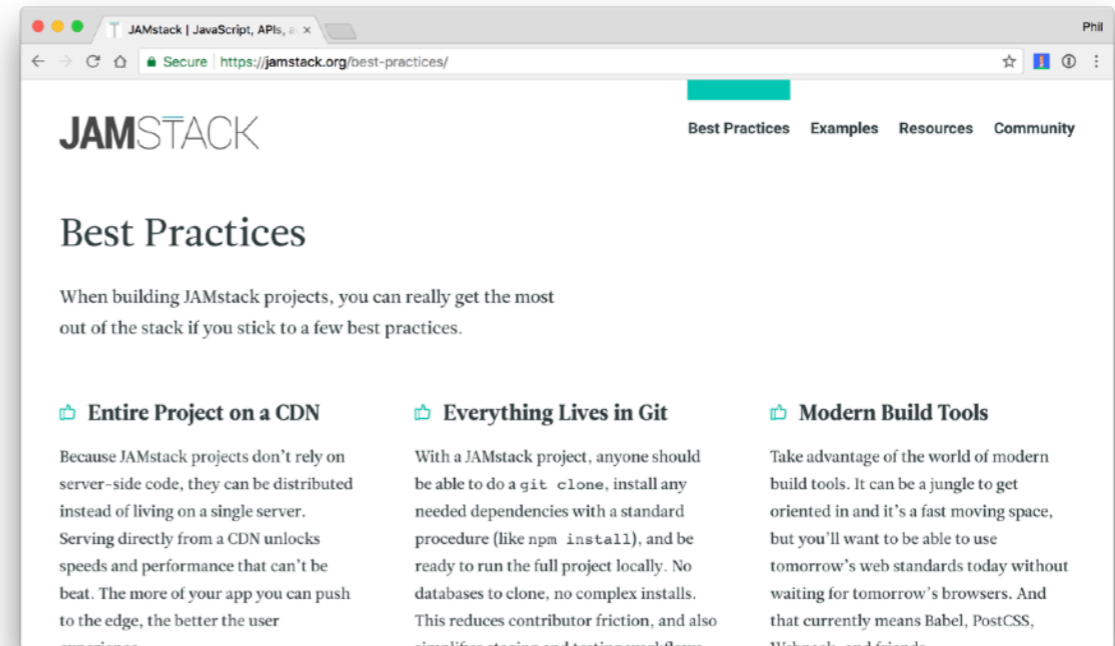
# THEPOWEROFSEVERLESS.INFO



# THE NEW DYNAMIC.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 OUR PROCESS BE  
WHAT CREATES IT**

## A NOTE ON EXPERTISE

IT'S AN AWFULLY  
FULL STACK

## A NOTE ON EXPERTISE

# USE THE SKILLS OF OTHERS

# THANK YOU

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**PHIL HAWKSWORTH**

