

# WHY JAMSTACK?

## BEYOND STATIC SITES

**PHIL HAWKSWORTH**





**HELLO**



Next wave infrastructure

We Are Developers. 2018

@philhawsworth

@PHILHAWKSWORTH

# WHY JAMSTACK?

## BEYOND STATIC SITES

**PHIL HAWKSWORTH**





# WHY **JAMSTACK**?

## BEYOND STATIC SITES

**PHIL HAWKSWORTH**



# WHY **JAMSTACK**?

## BEYOND **STATIC** SITES

**PHIL HAWKSWORTH**



# STATIC



# STATIC





# STATIC



# STATIC

***/ˈstætɪk/***

***lacking in movement,  
action, or change,  
especially in an undesirable  
or uninteresting way.***



# STATIC

*/ˈstætɪk/*

*lacking in movement,  
action, or change,  
especially in an undesirable  
or uninteresting way.*



# STATIC

## ARCHITECTURE?

*or*

## RESULT?



# STATIC

## ARCHITECTURE?

*or*

## EXPERIENCE?

# STATIC

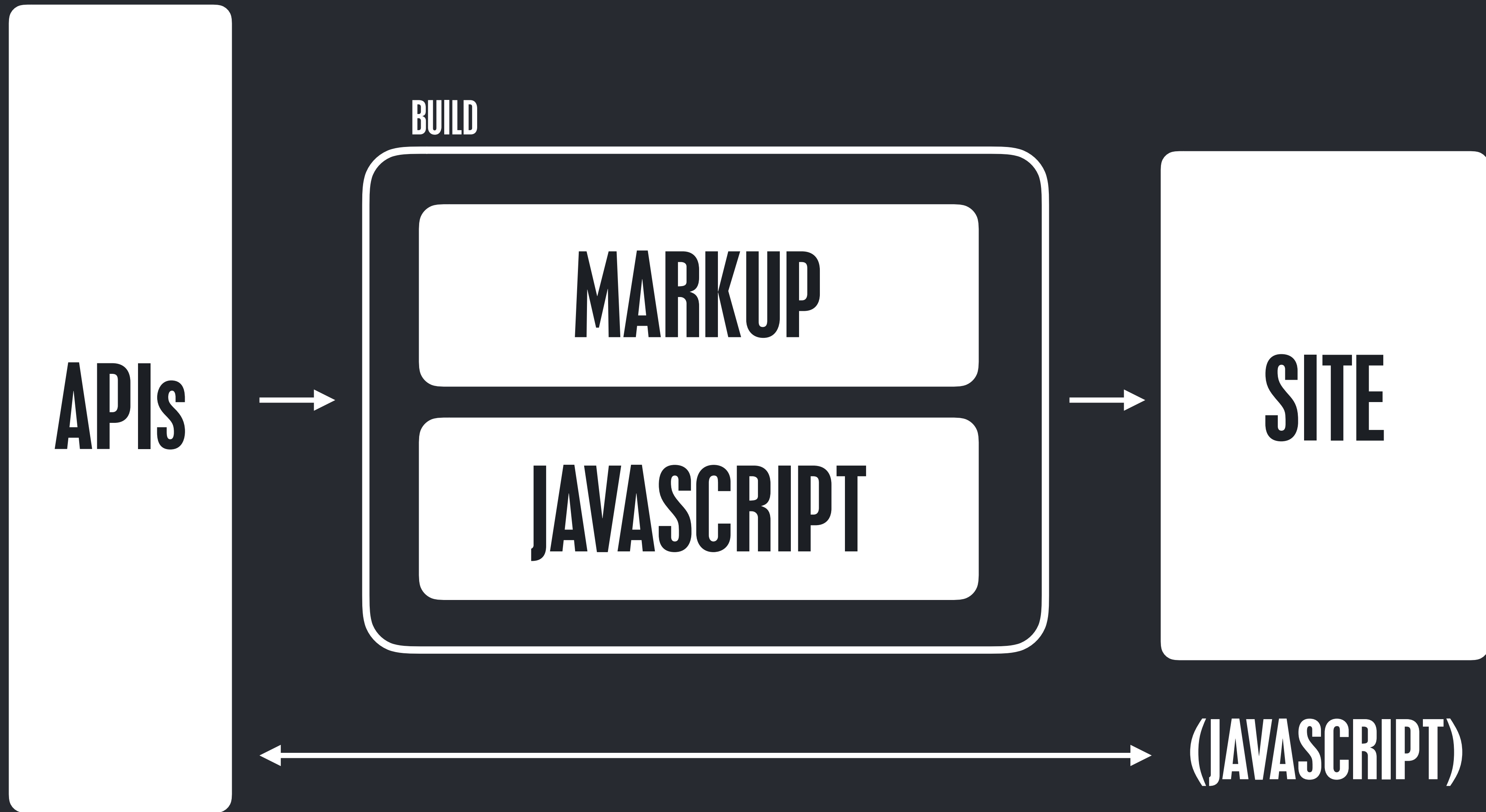
*as a*

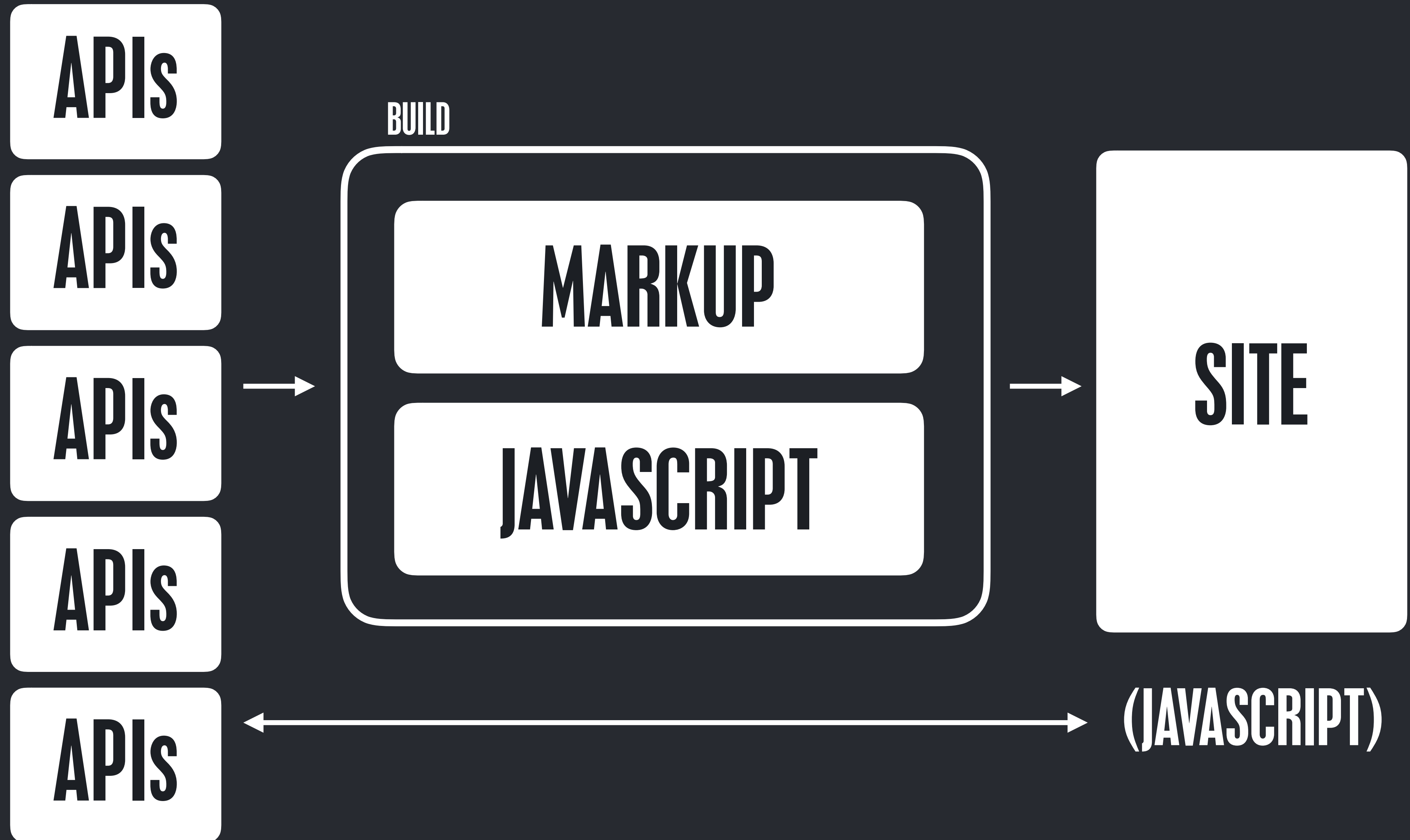
# VIRTUE

*beyond*  
**STATIC**

# *jamstack*

**JAVASCRIPT / API / MARKUP**





# DECOUPLING

Netlify Where your frontend lives Docs info@mathias-billmann.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

Free 11/21/17

smashing-commerce  
smashing-commerce.netlify.com

Free 11/19/17

lifeguard-canary-50721  
lifeguard-canary-50721.netlify.com

Free 11/12/17

smashing-prod  
www.smashingmagazine.com

Free 11/12/17

sensor-ethel-18601  
sensor-ethel-18601.netlify.com

Free 11/10/17

waiter-make-13470  
waiter-make-13470.netlify.com

Free 11/6/17

goal-keeper-elvis-10753  
goal-keeper-elvis-10753.netlify.com

Free 11/6/17

chief-executive-officer-lion...  
chief-executive-officer-lion-60360.netlify.com

Free 7/23/17

« 1 2 3 4 5 6 7 8 »

Netlify 2014

Netlify Where your frontend lives Docs info@mathias-billmann.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	<a href="https://github.com/billmann/gatsby-starter-netlify-cms">https://github.com/billmann/gatsby-starter-netlify-cms</a>
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
- ensor-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

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# 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 experience.

**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>

[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 [Delete](#)

**Current State:** Deployed

**Created At:** 2:30:27 PM

**Updated At:** 12:04:58 AM

All teams ▾

Search site New site from Git

	<b>www.netlifycms.org</b> Deploys from GitHub	Owned by Netlify Last update at 12:04 am (3 minutes ago)	➤
	<b>cms-demo</b> Deploys from GitHub	Owned by Netlify Last update at 12:04 am (3 minutes ago)	➤
	<b>trunews-rss</b> Deploys from Bitbucket	Owned by Flowing Streams Last update at 12:00 am (7 minutes ago)	➤
	<b>www.smashingmagazine.com</b> Deploys from GitHub	Owned by Smashing Magazine Last update on Dec 11 (18 minutes ago)	➤
	<b>app</b> Deploys from GitHub	Owned by Netlify Last update on Dec 11 (2 hours ago)	➤
	<b>storybook</b> Deploys from GitHub	Owned by Netlify Last update on Dec 11 (2 hours ago)	➤
	<b>smashingcomments</b> Deploys from GitHub	Owned by Smashing Magazine Last update on Dec 11 (2 hours ago)	➤
	<b>www.netlify.com</b> Deploys from GitHub	Owned by Netlify Last update on Dec 11 (6 hours ago)	➤
	<b>trunews-archived-articles-etc</b> Deploys from Bitbucket	Owned by Flowing Streams Last update on Dec 11 (9 hours ago)	➤
	<b>status</b> Deploys from GitHub	Owned by Netlify Last update on Dec 11 (12 hours ago)	➤
	<b>www.staticgen.com</b> Deploys from GitHub	Owned by Netlify Last update on Dec 11 (14 hours ago)	➤
	<b>staging.smashingmagazine.com</b> Deploys from GitHub	Owned by Smashing Magazine Last update on Dec 11 (15 hours ago)	➤
	<b>forklet.com</b> Manual deploys	Owned by Mathias Billmann Last update on Dec 10 (a day ago)	➤
	<b>www.timespace.dk</b> Deploys from GitHub	Owned by Mathias Billmann Last update on Dec 10 (a day ago)	➤
	<b>codesassy.com</b> 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 »

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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 →](#)

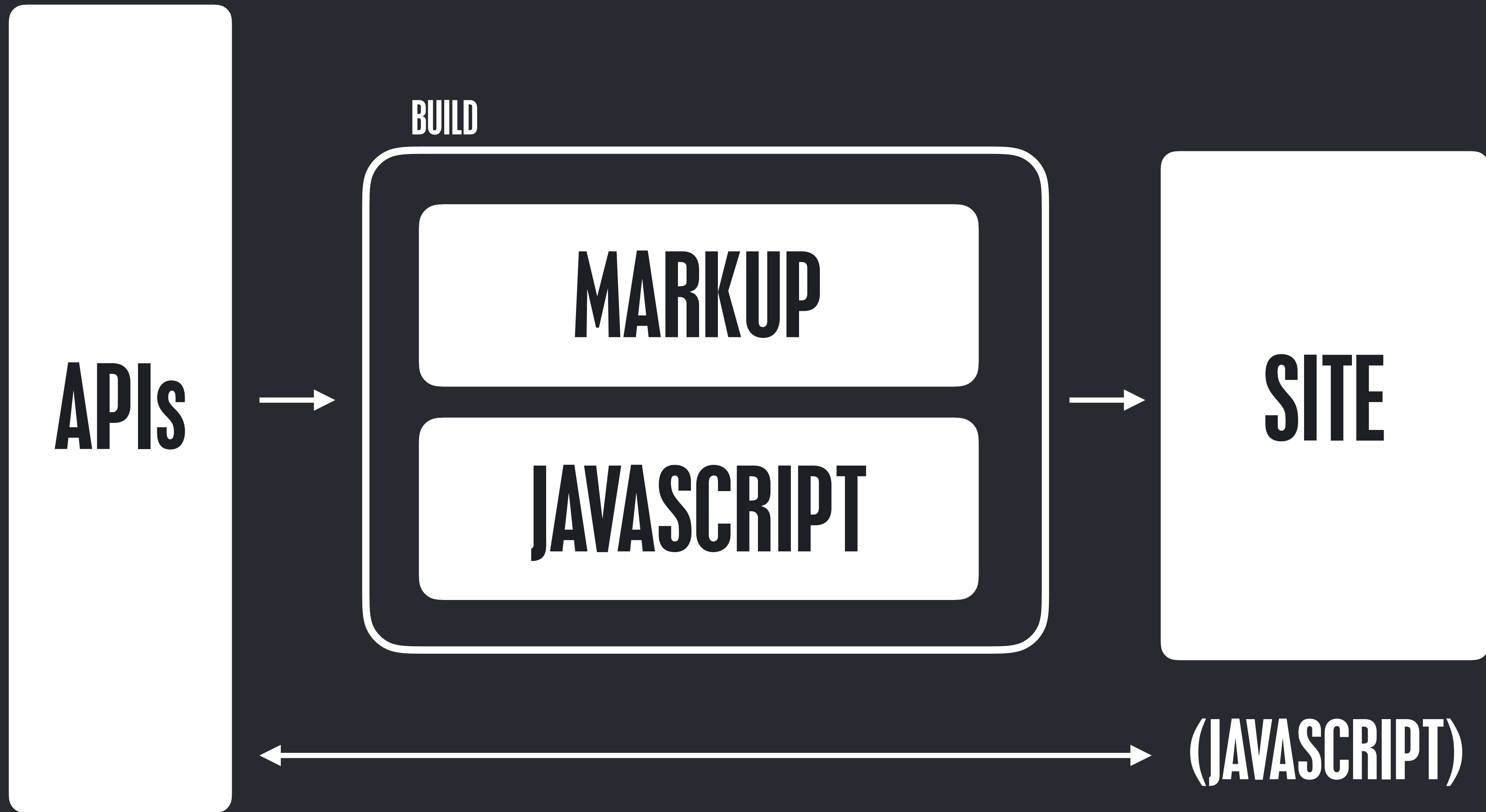
**Active Split Test**

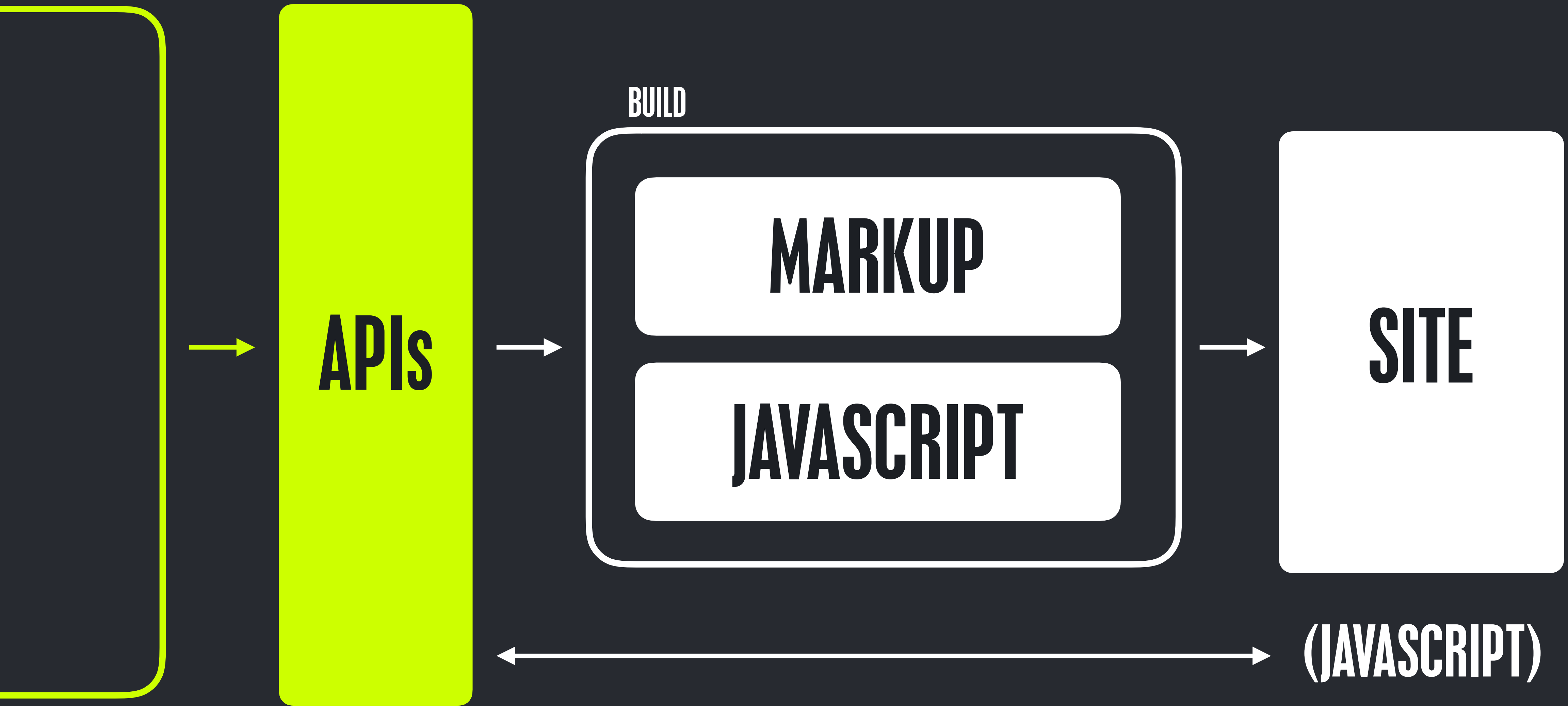
Split traffic to multiple branches

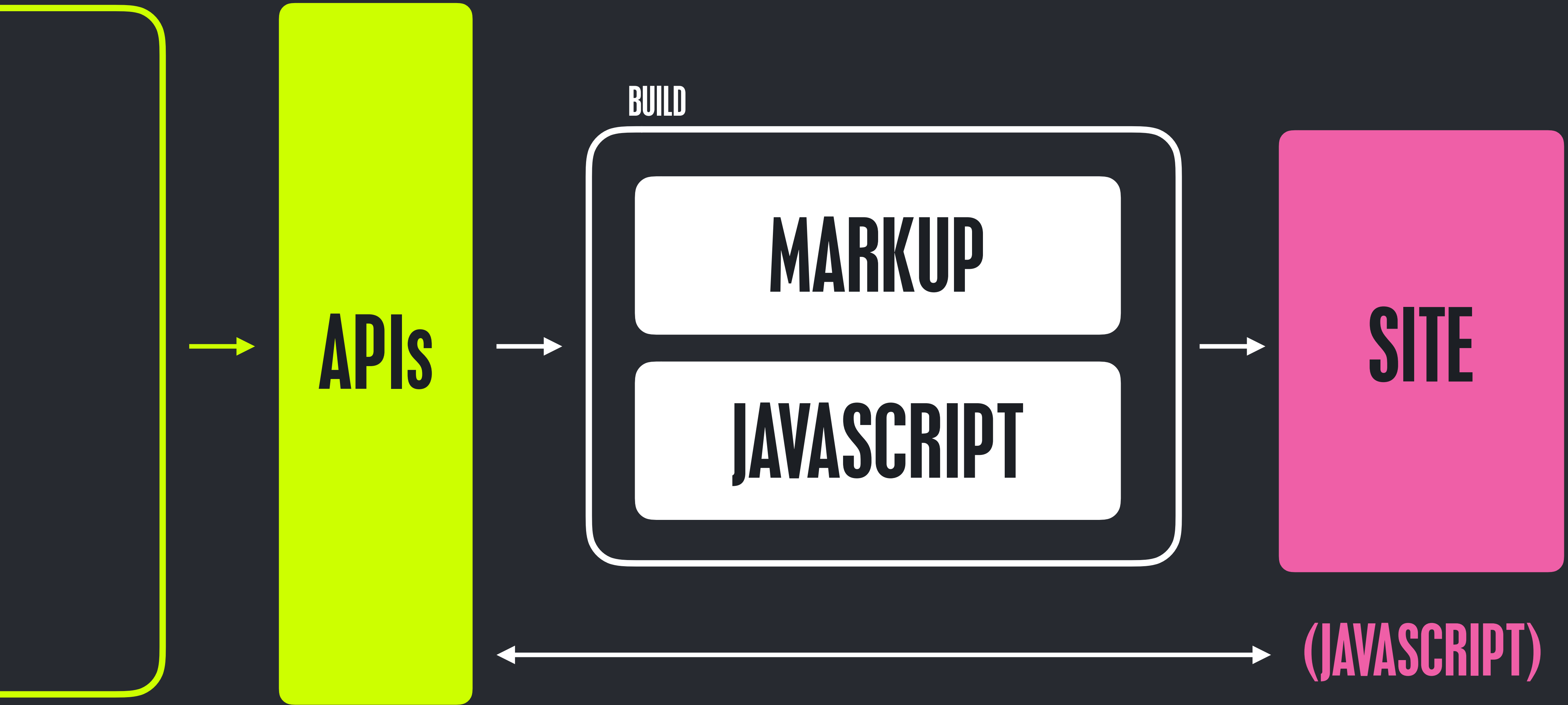
Split the traffic to your main domain between two or more branches, with no performance loss. Set up easy A/B tests with one click, leveraging edge node logic requests.

[Start a Split Test →](#)

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# ECOSYSTEM

CONTENT / ASSETS / AUTHENTICATION / E-COMMERCE / EVENTS

*beyond*  
**STATIC**

*beyond*  
**STATIC**  
**EXPERIENCES**



# TOOLBELT

# TOOLBELT

BUILD AUTOMATION  
ACTION TRIGGERS  
EVENTS  
APIs  
SERVERLESS

# TOOLBELT

**BUILD AUTOMATION**

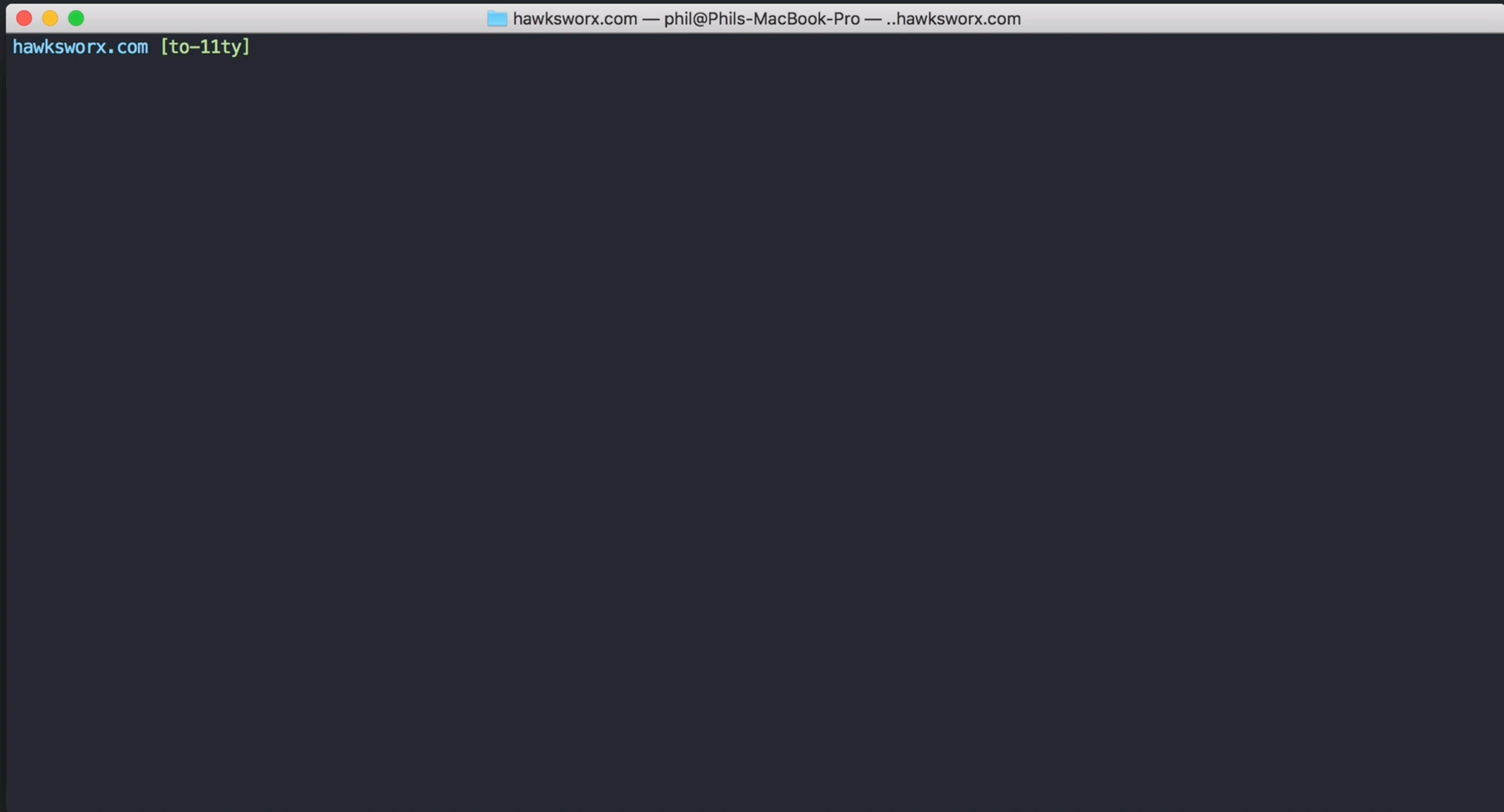
**ACTION TRIGGERS**

**EVENTS**

**APIs**

**SERVERLESS**



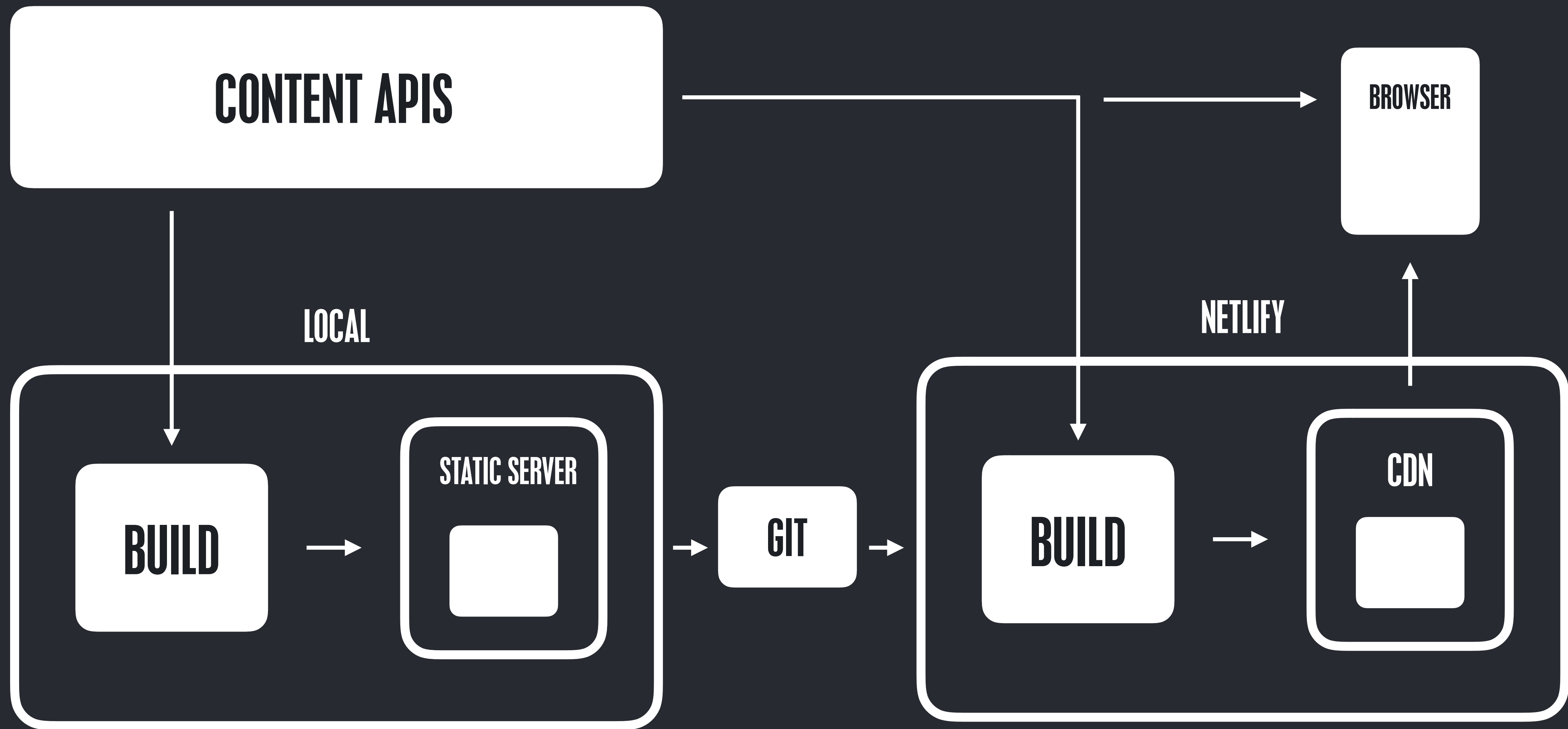


A screenshot of a macOS terminal window. The title bar at the top shows three window control buttons (red, yellow, green) on the left, followed by a folder icon and the text "hawksworx.com — phil@Phils-MacBook-Pro — ../hawksworx.com". The terminal content shows the prompt "hawksworx.com [to-11ty]" in a light blue font, with the rest of the terminal area being empty and dark blue.

# BUILD AUTOMATION

TESTS / CONTENT GATHERING / SITE GENERATION / OPTIMISATION / DEPLOY

# EXAMPLE





# TOOLBELT

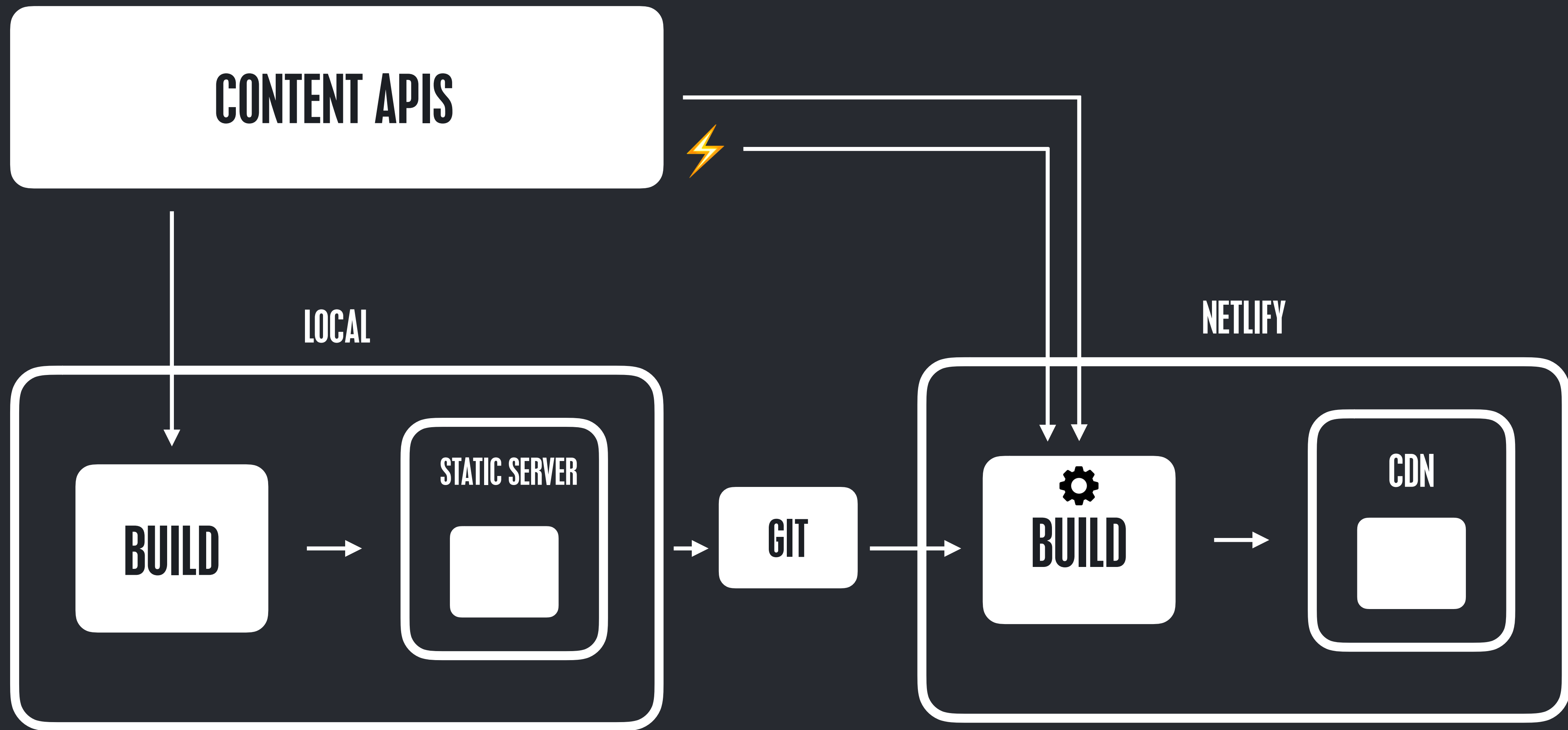
BUILD AUTOMATION

**ACTION TRIGGERS**

EVENTS

APIs

SERVERLESS



# TOOLBELT

BUILD AUTOMATION

ACTION TRIGGERS

EVENTS

APIs

SERVERLESS

**WHAT EVENTS?**

# EXTERNAL

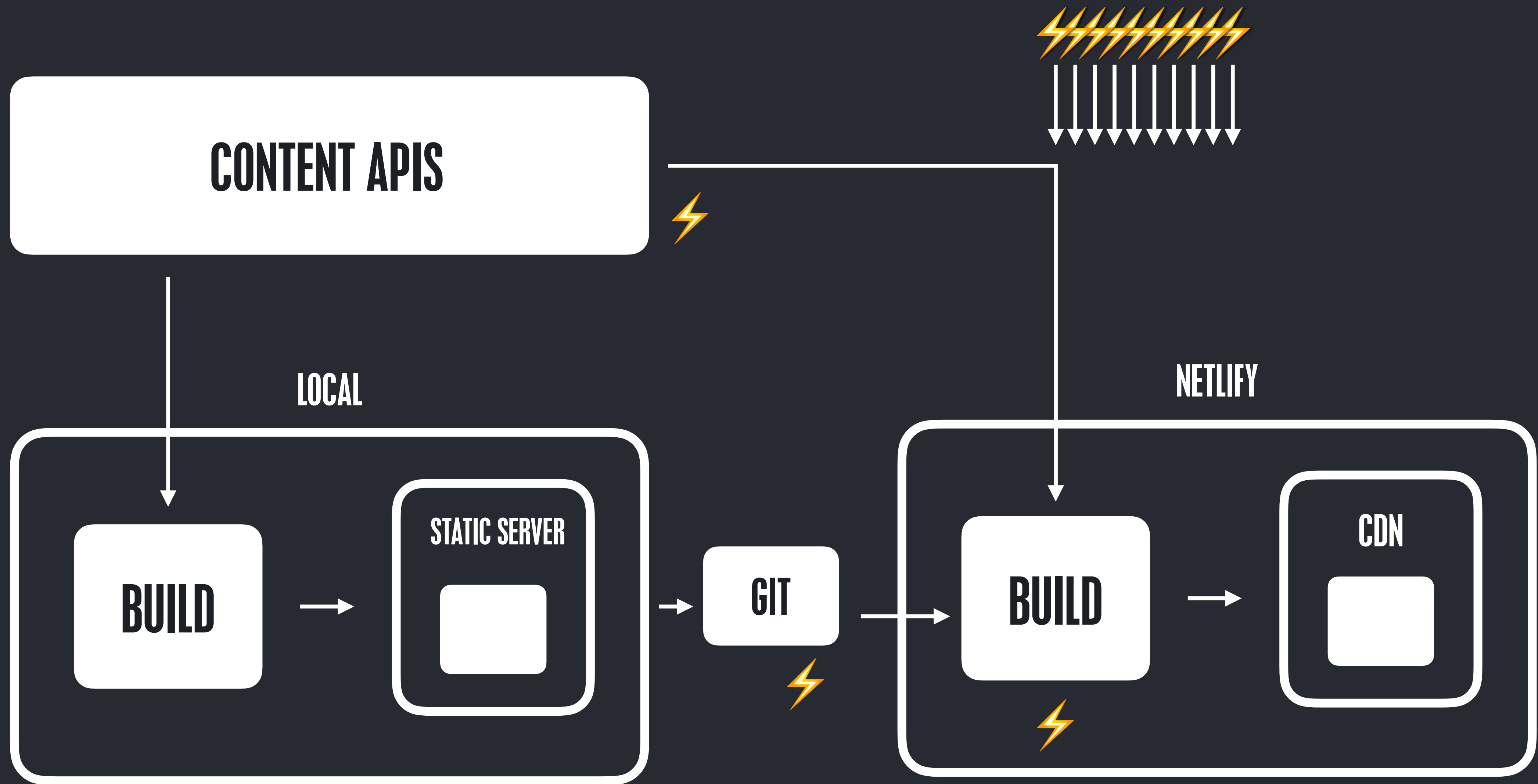
---

**FORM SUBMISSIONS**  
**CONTENT UPDATES**  
**ACTIVITY DETECTION**  
**SCHEDULED EVENTS**  
**GIT ACTIVITY**

# NETLIFY

---

**FORM SUBMISSIONS**  
**BUILD/DEPLOY EVENTS**  
**SPLIT TEST EVENTS**  
**IDENTITY SERVICE EVENTS**



# TOOLBELT

BUILD AUTOMATION

ACTION TRIGGERS

EVENTS

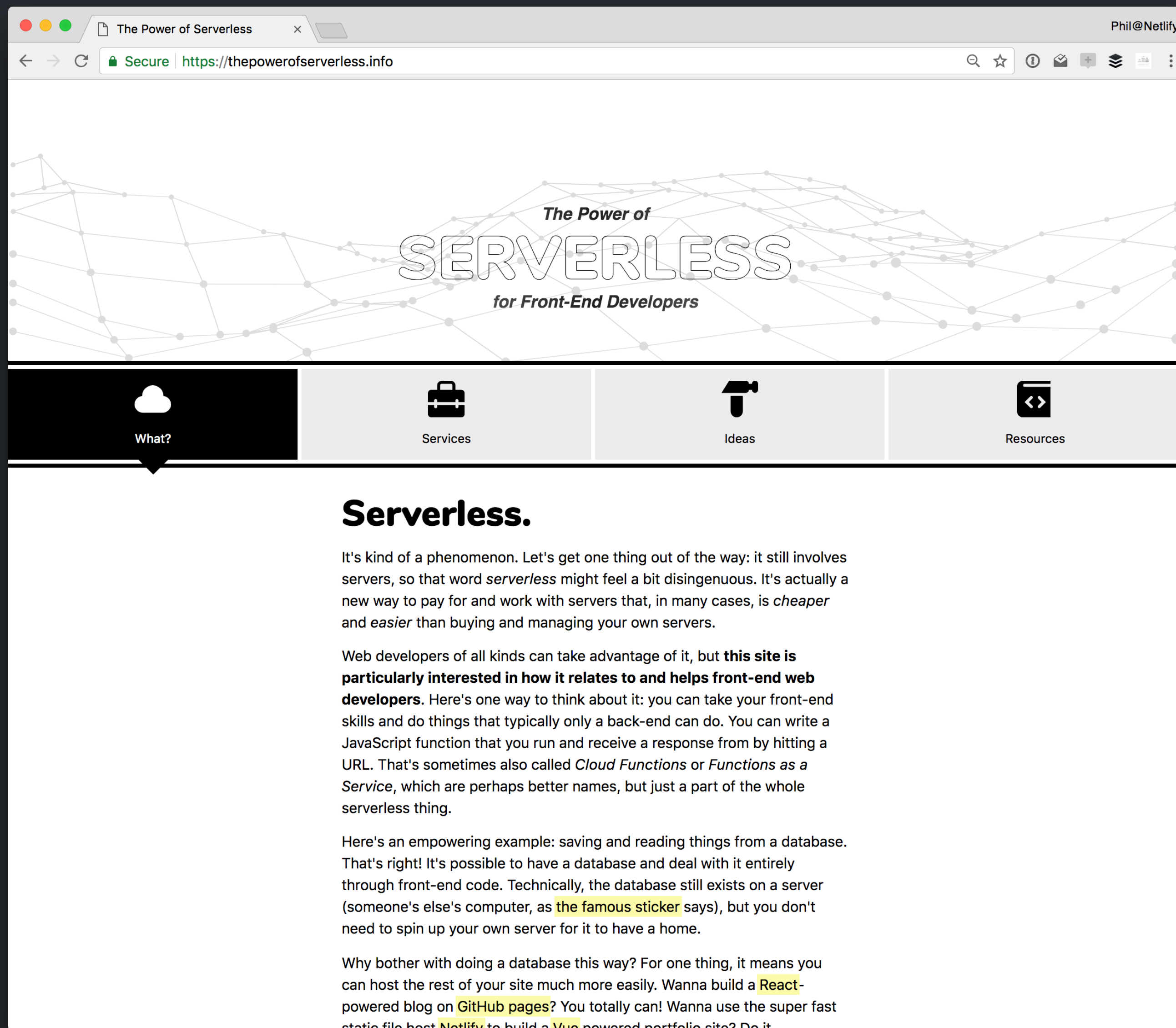
APIs

SERVERLESS

# ECOSYSTEM

CONTENT / ASSETS / AUTHENTICATION / E-COMMERCE / EVENTS





The Power of  
**SERVERLESS**  
for Front-End Developers

What?

Services

Ideas

Resources

## Serverless.

It's kind of a phenomenon. Let's get one thing out of the way: it still involves servers, so that word *serverless* might feel a bit disingenuous. It's actually a new way to pay for and work with servers that, in many cases, is *cheaper* and *easier* than buying and managing your own servers.

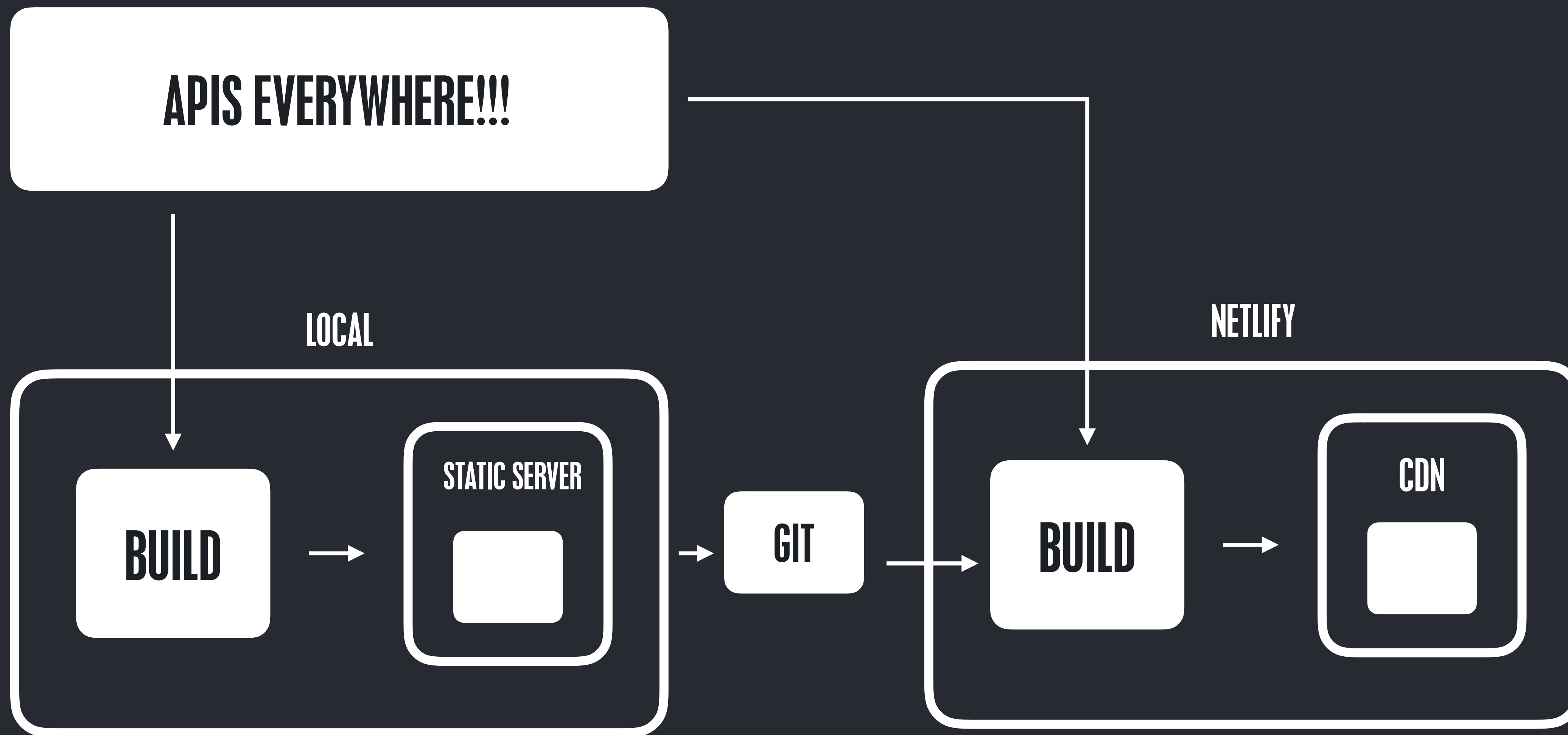
Web developers of all kinds can take advantage of it, but **this site is particularly interested in how it relates to and helps front-end web developers**. Here's one way to think about it: you can take your front-end skills and do things that typically only a back-end can do. You can write a JavaScript function that you run and receive a response from by hitting a URL. That's sometimes also called *Cloud Functions* or *Functions as a Service*, which are perhaps better names, but just a part of the whole serverless thing.

Here's an empowering example: saving and reading things from a database. That's right! It's possible to have a database and deal with it entirely through front-end code. Technically, the database still exists on a server (someone's else's computer, as [the famous sticker](#) says), but you don't need to spin up your own server for it to have a home.

Why bother with doing a database this way? For one thing, it means you can host the rest of your site much more easily. Wanna build a [React-powered blog on GitHub pages](#)? You totally can! Wanna use the super fast static file host [Netlify](#) to build a [Vue](#) powered portfolio site? Do it.

FAAS PROVIDERS  
HOSTING  
FORM HANDLING  
PAYMENTS  
HEADLESS CMS  
MEDIA STORAGE  
NOTIFICATION SERVICES  
SEARCH  
PUSH NOTIFICATIONS  
AUTH

*thepowerofserverless.info*



# TOOLBELT

BUILD AUTOMATION  
ACTION TRIGGERS  
EVENTS  
APIs  
SERVERLESS

**I ABSOLUTELY POSITIVELY  
NEED A LITTLE LOGIC  
ON A SERVER**



A stylized illustration of a superhero character in a black suit with a red cape, running through a storm. The character is in a dynamic, forward-leaning pose, with arms outstretched. The background is a dark, stormy sky with a large, dark, jagged shape resembling a lightning bolt or a piece of debris falling from the top. The ground is a mix of brown and tan colors, suggesting a rocky or uneven terrain. The overall style is flat and graphic, with a limited color palette of black, red, brown, and tan.

# SERVERLESS TO THE RESCUE

# SERVERLESS

SECRETS  
PROXIED API CALLS  
DATA  
A LITTLE DYNAMISM

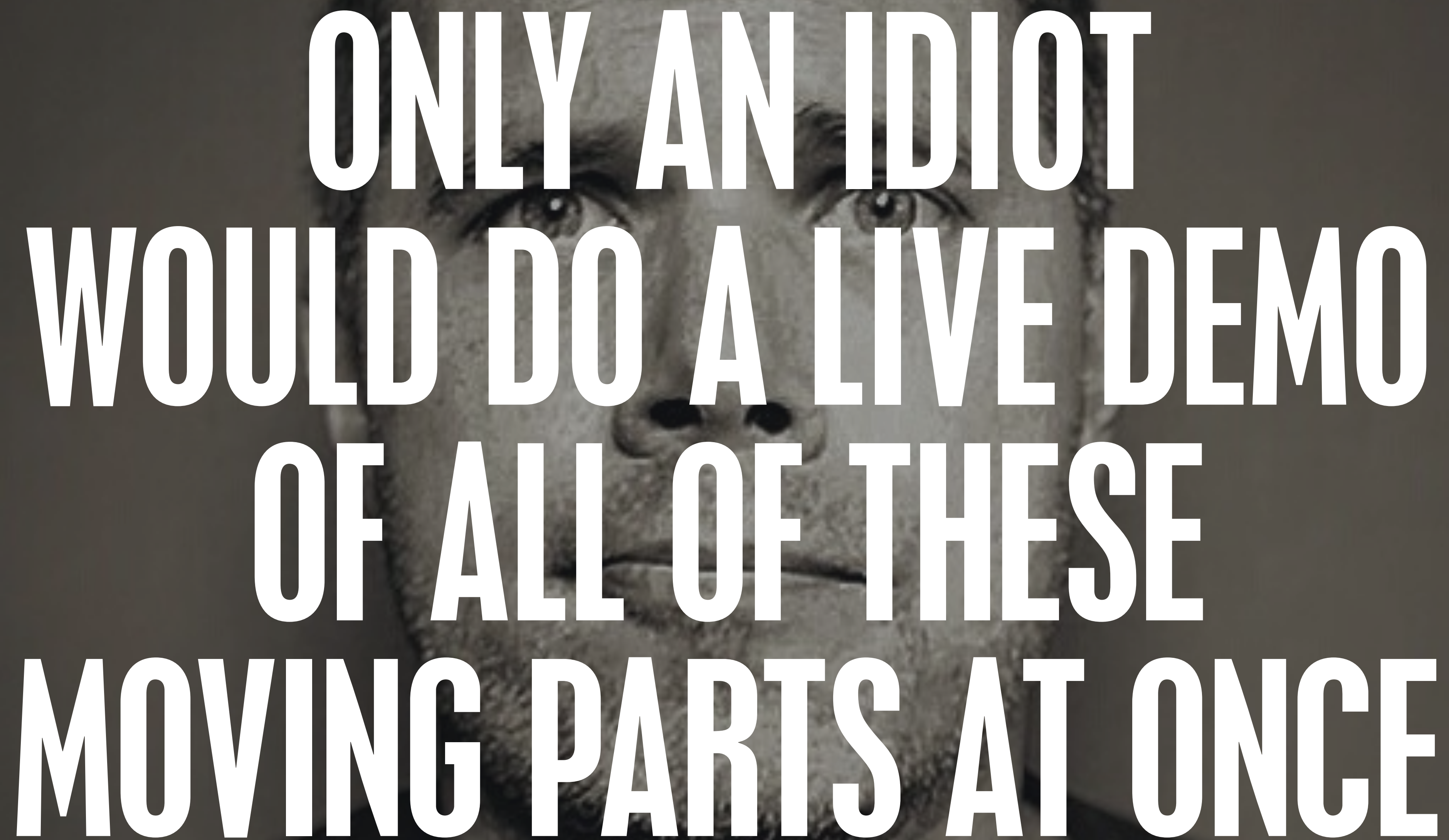
# BRINGING IT ALL TOGETHER

# TOOLBELT

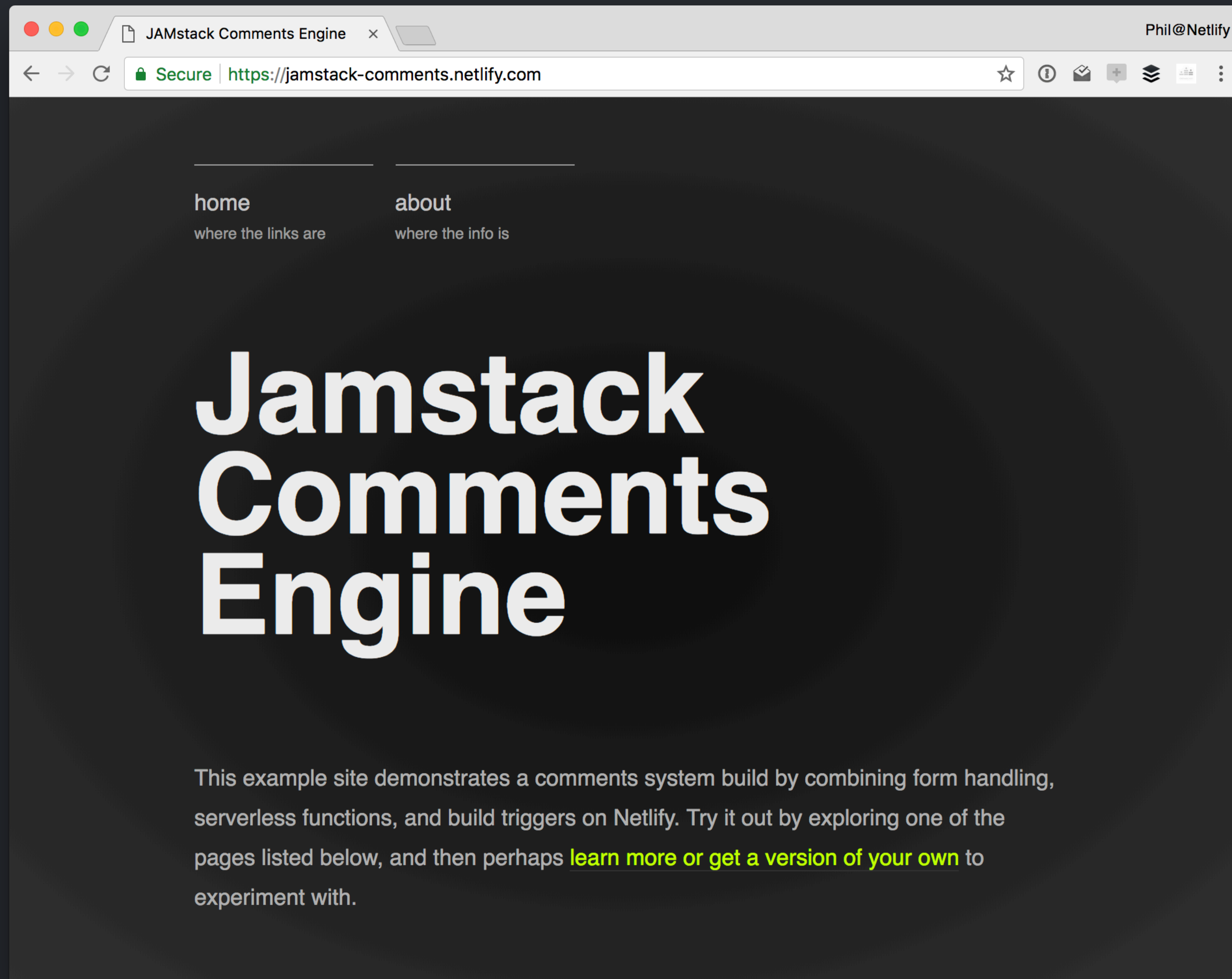
**BUILD AUTOMATION**  
**ACTION TRIGGERS**  
**EVENTS**  
**APIs**  
**SERVERLESS**



**ONLY AN IDIOT  
WOULD DO A LIVE DEMO  
OF ALL OF THESE  
MOVING PARTS AT ONCE**



**ONLY AN IDIOT  
WOULD DO A LIVE DEMO  
OF ALL OF THESE  
MOVING PARTS AT ONCE**



*jamstack-comments.netlify.com*  
*app.netlify.com*



# TOOLBELT

**BUILD AUTOMATION**  
**ACTION TRIGGERS**  
**EVENTS**  
**APIs**  
**SERVERLESS**

# STATIC

# STATIC?



*beyond*  
**STATIC**

**THANKS**  
**QUESTIONS?**

**@PHILHAWKSWORTH**