

Dynamic Static Sites



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Developer Evangelist | Contentful

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He/Him

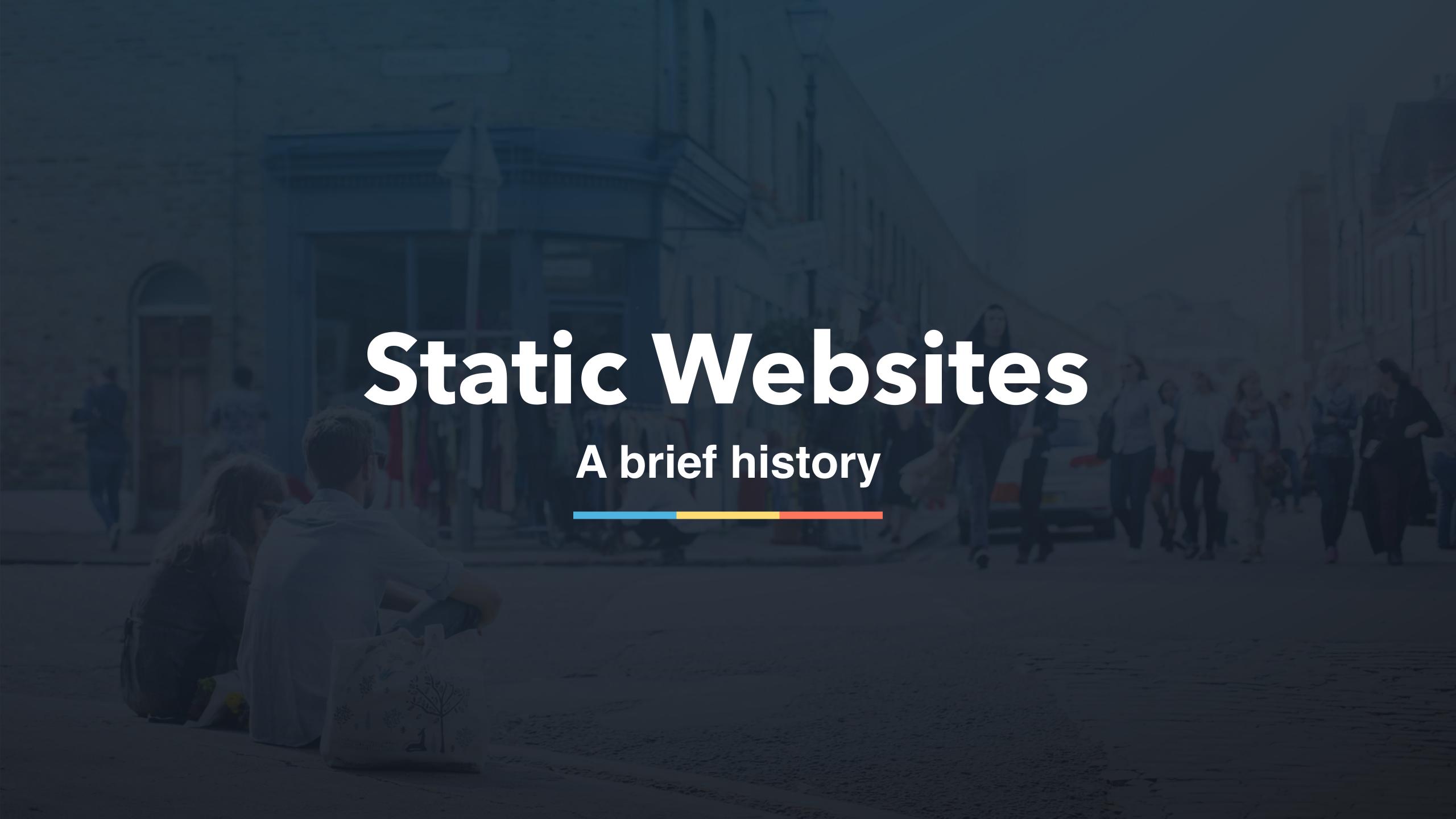


Don't let a CMS get in the way of shipping software.

Contentful provides a content infrastructure that enables teams to power content in any digital product.

What we'll do today

- A brief history of static website
- Why static sites are awesome
- Why and how to combine static sites and serverless



THE FIRST WEBSITE WAS A STATIC SITE

World Wide Web

The WorldWideWeb (W3) is a wide-area hypermedia information retrieval initiative aiming to give universal access to a large universe of documents.

Everything there is online about W3 is linked directly or indirectly to this document, including an executive summary of the project, Mailing lists, Policy, November's W3 news, Frequently Asked Questions

/hat's out there?

Pointers to the world's online information, <u>subjects</u>, <u>W3 servers</u>, etc.

on the browser you are using

on the prowser you are usi

Software Products

A list of W3 project components and their current state. (e.g. <u>Line Mode</u> ,X11 <u>Viola</u> , <u>NeXTStep</u> , <u>Servers</u> , <u>Tools</u> , <u>Mail robot</u> ,<u>Library</u>)

Technica

Details of protocols, formats, program internals etc

Dibliogra

Paper documentation on W3 and references.

reopie

A list of some people involved in the project

Histor

A summary of the history of the project.

How can I help 7

If you would like to support the web...

Getting cod

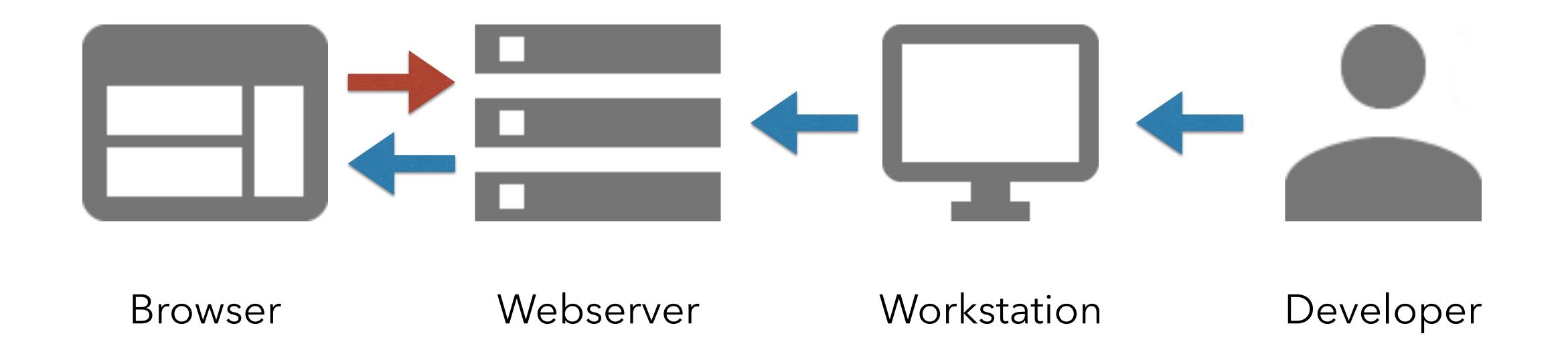
Getting the code by anonymous FTP, etc.

MacBook



LET'S DEVELOP LIKE ITS 1991

- Every website was static
- Layout wasn't a thing everything was one
 vertical flow.
- Link management was manual



FIRST WEBSEARCH

AliLinks - Links to the web's best sites all on one easy to navigate page!	
	The Web9000 Network makes it easy and affordable.
Computing Local Computing State Computer State Computer Name Computer State Comp	
Browsers Etc.	Computing Entertainment Living Money Newstand Recreation Research Shopping BOTTOM Amayor I Arachae (doe) I Chrome I Microsoft IE I Eirofox & Thunderbird I Elashalayer I Maython I Netscape (old) I Opera I PDE Peader I Pegasus Mail I QuickTime I PealPlayer I Safari I Shockwaye
CGI/Java	Amaya Arachne(dos) Chrome Microsoft IE Firefox & Thunderbird Flashplayer Maxthon Netscape (old) Opera PDF Reader Pegasus Mail QuickTime RealPlayer Safari Shockwave CCL Resource Extrapia Camelan Java Boutique Java Script Matte Webscript
	CGI Resource Extropia Gamelan Java Boutique JavaScript Matt's Webscripts AMD Apple Compage Cyrix Dell Digital Electro Service Catoway HP Intel Wingbig
Companies	AMD Apple Compaq Cyrix Dell Digital Electro Service Gateway HP Intel Winchip Apple Apple Compaq Cyrix Dell Digital Electro Service Gateway HP Intel Winchip
Free Services	Announce: Addurl ATC Freepromote Shotgun Banners: Link Exchange Smartclicks Chat: ActiveWorlds Chatlist Globe Talk City WBS Yack! Email: Hotmail Juno MailExcite Hosting: Angelfire Fortune City Geocities Trailerpark Tripod Web9000 Xoom
Games	A. Vault Gamecenter Game Finder GamePen GamePower G. Domain Games.net GameSpot Happy Puppy OGR
Site Help	Absolute Builder.com DJ Quad developer.com Dev. Zone HOME HTMLgoodies HTML Guide WebDeveloper reallybig.com Webmonkey Webreference Web Review
Site Tools	Color Chart Cool Tool Dr. HTML FreeForm GIF Wizard NetMechanic SBN Gallery Site Garage
Software	Dave Central Download Extreme Mac Filemine FilePile Filez Freewareplus Freewareweb Jumbo Nonags Softseek Stroud's Tucows Windrivers Winfiles Winsite ZDnet Hotfiles
Support	Newbie-U Microsoft PC-Help Support Help Whatis
Entertainmen Jump to Section: <u>TOP</u>	t Computing Entertainment Living Money Newstand Recreation Research Shopping BOTTOM
Movies	Boxoffice Cinemachine Film.com Film Scouts In Theaters IMDb Moviefinder MovieLink Mr. Cranky Reel
Movie Studios	Buena Vista Disney Dimension Fox Fox Searchlight Hollywood MGM/UA Miramax New Line October Paramount Sony Universal Warner Bros
Music Ezines	Allstar Classical CMJ Online Ear 1 MTV RollingStone SonicNet VibeOnline
Music Concerts	LiveConcerts Live Online Pollstar Ticketmaster WILMA
Music News	Billboard HitsWorld imusic Newswire
Music Search	IUMA JazzCentral LyricServer MusicCentral MusicSearch UBL UnfURLed WallofSound
Stars	Cybersleaze eDrive E! Online Ent. Asylum E. Weekly Enquirer Hollywood Mr Showbiz People Variety
TV	click TV GIST Prevue Rock on TV Total TV TV Guide UltimateTV
TV Networks	ABC CBS Disney FOX ESPN HBO NBC PBS WB UPN SciFi
Living Jump to Section: <u>TOP</u>	Computing Entertainment Living Money Newstand Recreation Research Shopping BOTTOM
Art	A Resource CultureFinder Fine Site The Guide Playbill Buy/Sell: Doubletake
Education	<u>.edu A.S.D. AskERIC CollegeNet Petersons University Web 66</u>
Family	Family.com Parenthood Parent Soup Parents.com ParentTime WholeFamily
Food	BettyCrocker Digital Chef DineNet Epicurious Food TV I. Kitchen Kitchen Link Meals 4U PHYS Star Chefs Zagat

FIRST WEBCOMIC

DOCTOR FUN



The Salvation Army introduces its mobile assault vehicle

12/27/93

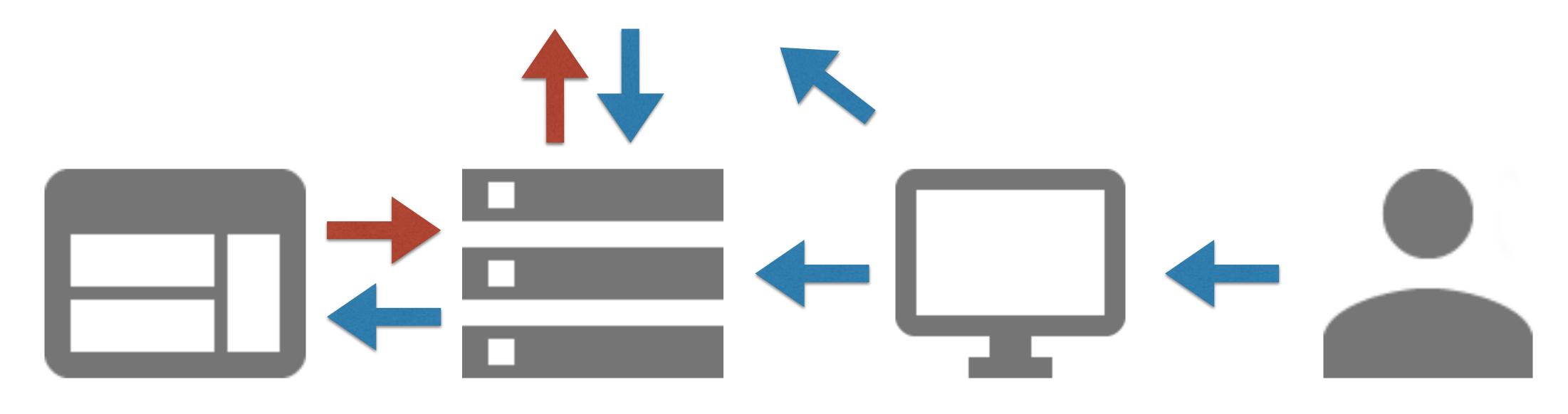
THINGS GOT DYNAMIC

- CGI was introduced in 1994
- Rasmus Lerdorf releases his "Personal Home Page Tools" in 1995
- Brendan Eich writes the prototype for JavaScript in 1995





Database



Browser

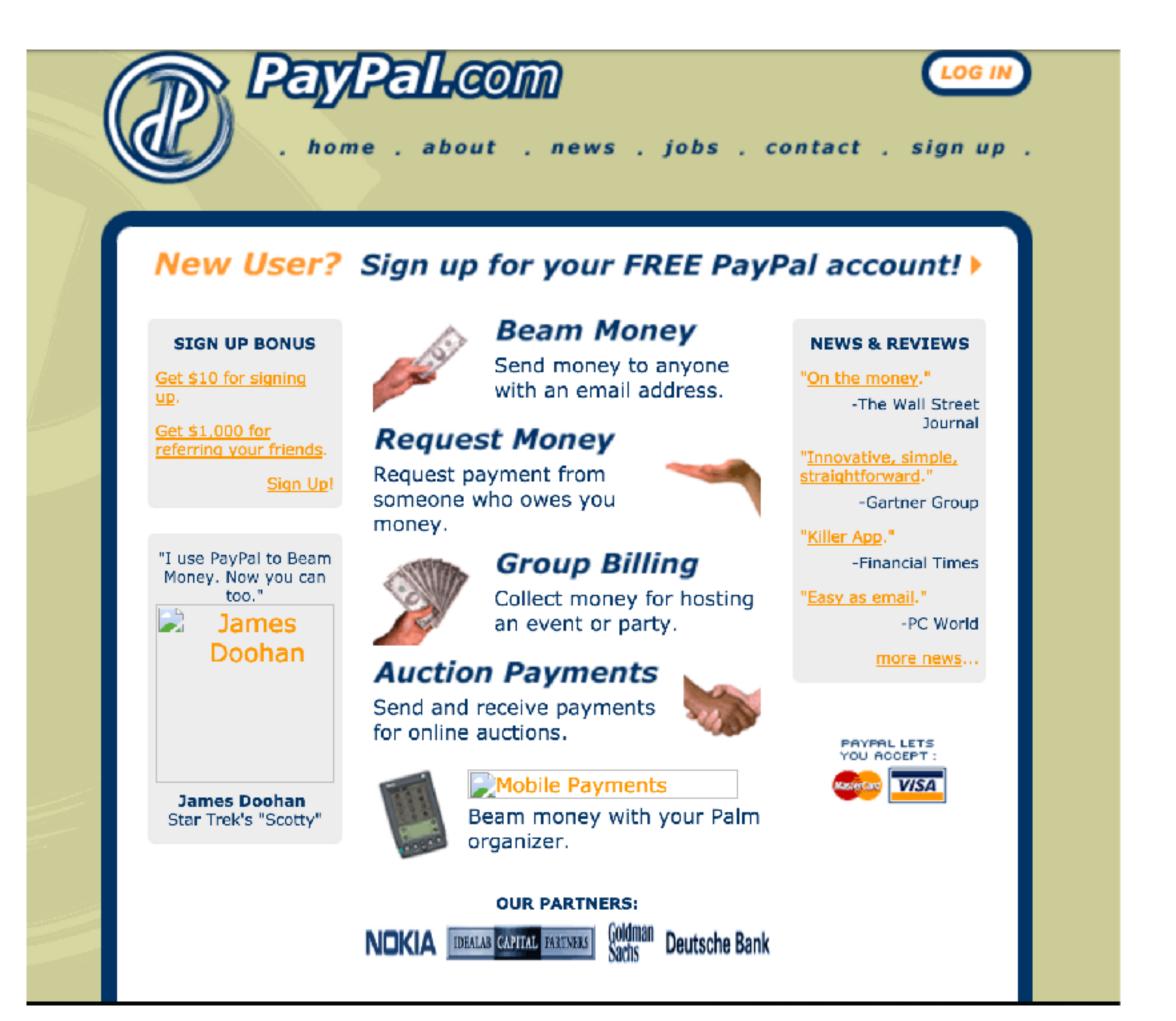
Webserver

Workstation

Developer

Fun Fact: SQL is 44 years old

E-COMMERCE IS TAKING OFF





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Spotlight! -- August 16th

These are the books we love, offered at Amazon.com low prices. The spotlight moves EVERY day so please come often.

ONE MILLION TITLES

Search Amazon.com's million title catalog by author, subject, title, keyword, and more... Or take a look at the books we recommend in over 20 categories... Check out our customer reviews and the award winners from the Hugo and Nebula to the Pulitzer and Nobel... and bestsellers are 30% off the publishers list...

YOUR OWN SPACE

WordPress

Home About Docs Dev Blog Utilities Support Download

WordPress is a semantic personal publishing platform with a focus on aesthetics, web standards, and usability.

For information about the WordPress project—its philosophy, current features, developers, and future direction—see the About section. For updates on development and announcements, see the <u>WordBlog</u>. If you'd like help with WordPress or have questions, the <u>support forums</u> are the place for you. If you just want to skip all the formalities and get the product, <u>download away</u>. For major announcements via email, use the signup form at the bottom of every page.

WordPress has also been named the new official branch of <u>b2</u>. We're looking forward to being a part of the community.

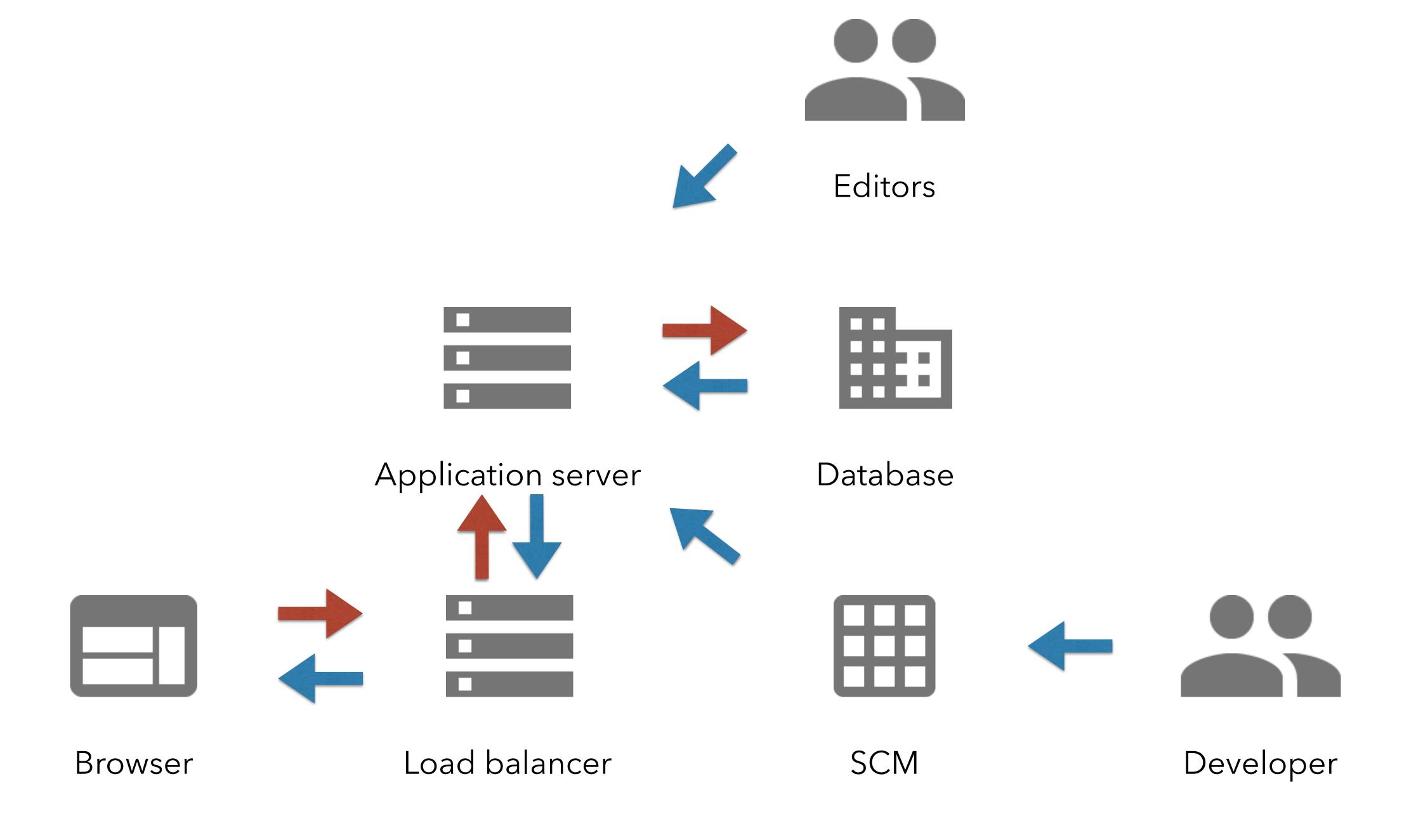
WordPress Announcements:



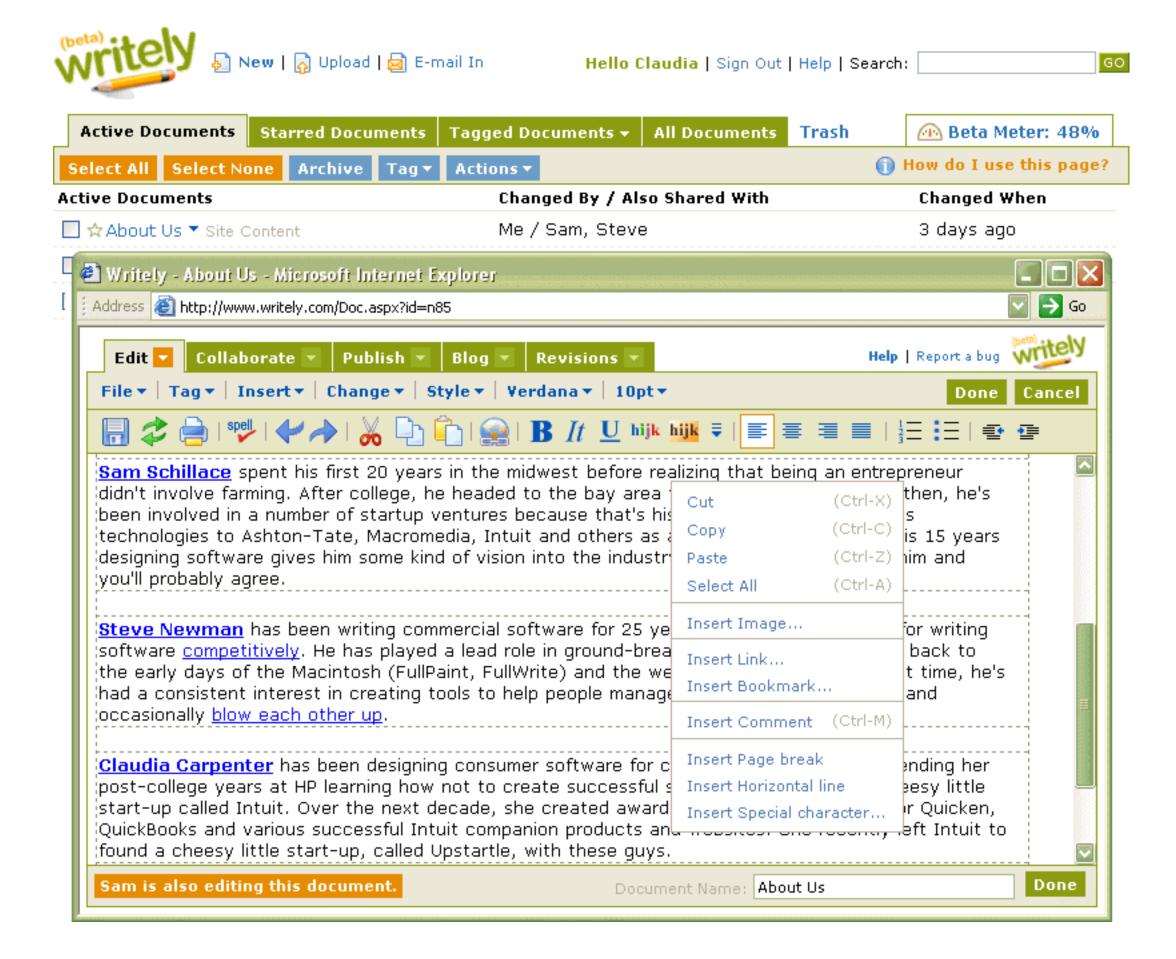


IT'S A BUSINESS NOW

- Microsoft ASP was releases in 1996, Sun JSP in 1999
- Hosting a dynamic, CMS,
 based website became easy
- Microsoft FrontPage and Marcomedia Dreamweaver
 released in 1996 and 1997



APPS ON THE WEB





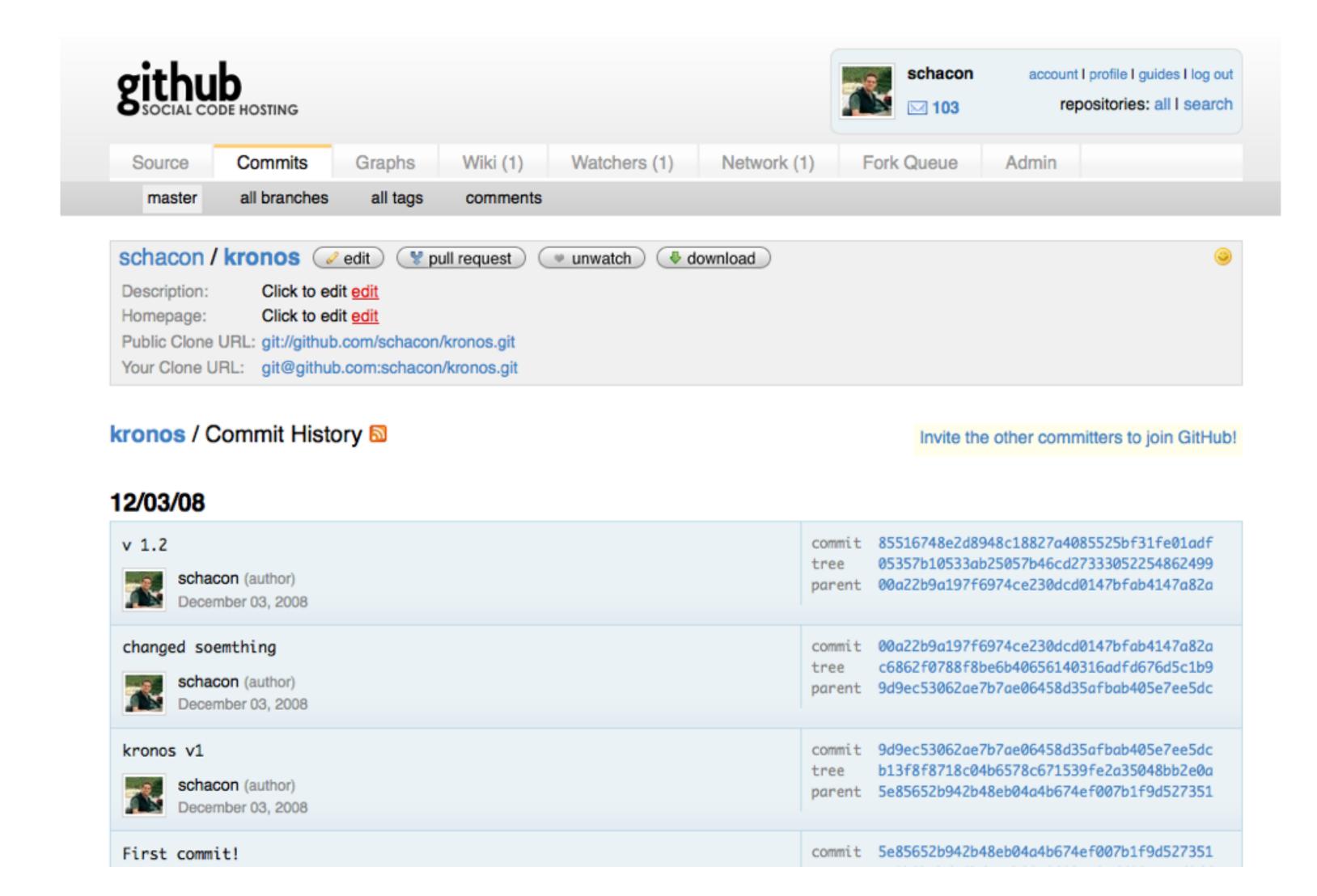
I GOT THE POWER

- XMLHttpRequest was part of IE5 in 1999
- SPA have been discussed since 2003
- jQuery was published in 2006, AngularJS in 2009



Modern static site builders

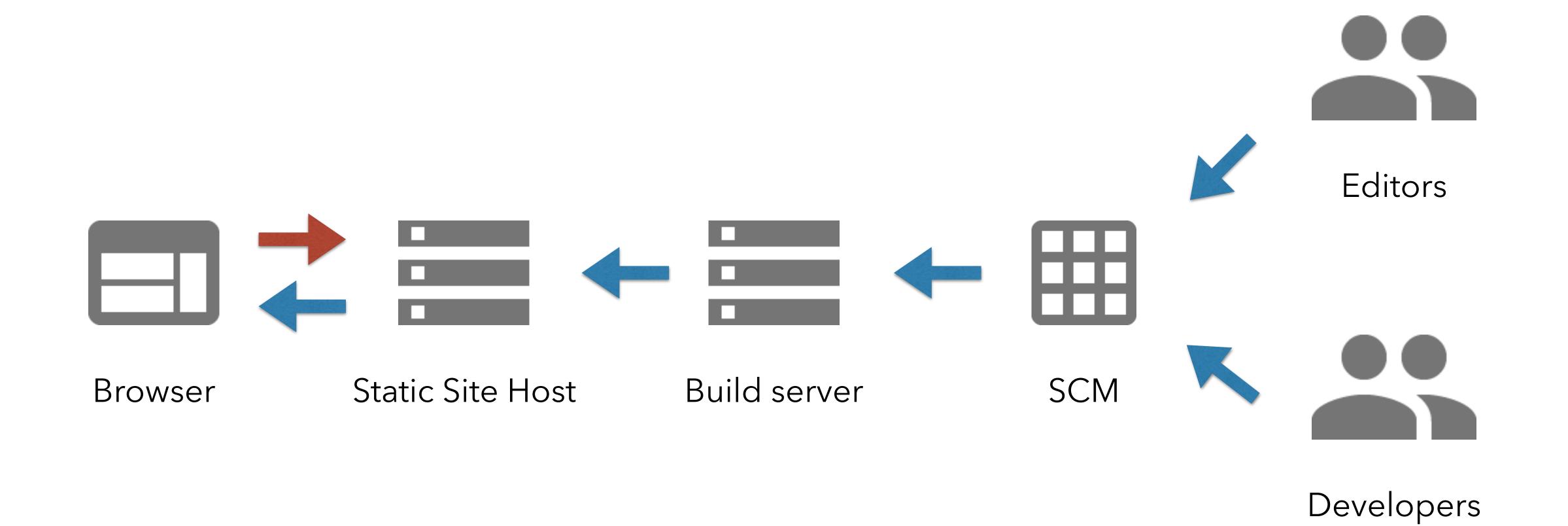
GITHUB



jekyll

transform your text into a monster

code docs install switch









Hexo

IT JUST MAKES YOUR LIFE EASIER



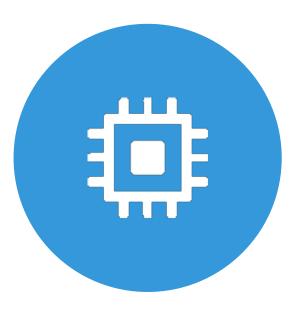
No Security issues

Without a server-side application or database the attack surface is minimal.



Trivial caching

CDNs are trivial to set up. Since every file gets delivered to every user as-is, no complex logic is necessary.



Great performance

Shuffling bytes from storage to the network is what servers are great at.



Easy maintenance

No random 500 errors, no dropped database connections.





Common requirements

O1 "Our editors don't know git, they need a GUI."

"We have a lot of content, we need full-text search."

"Our contact forms needs to send an email."

"We're running an online shop. You can't do that with a static site."

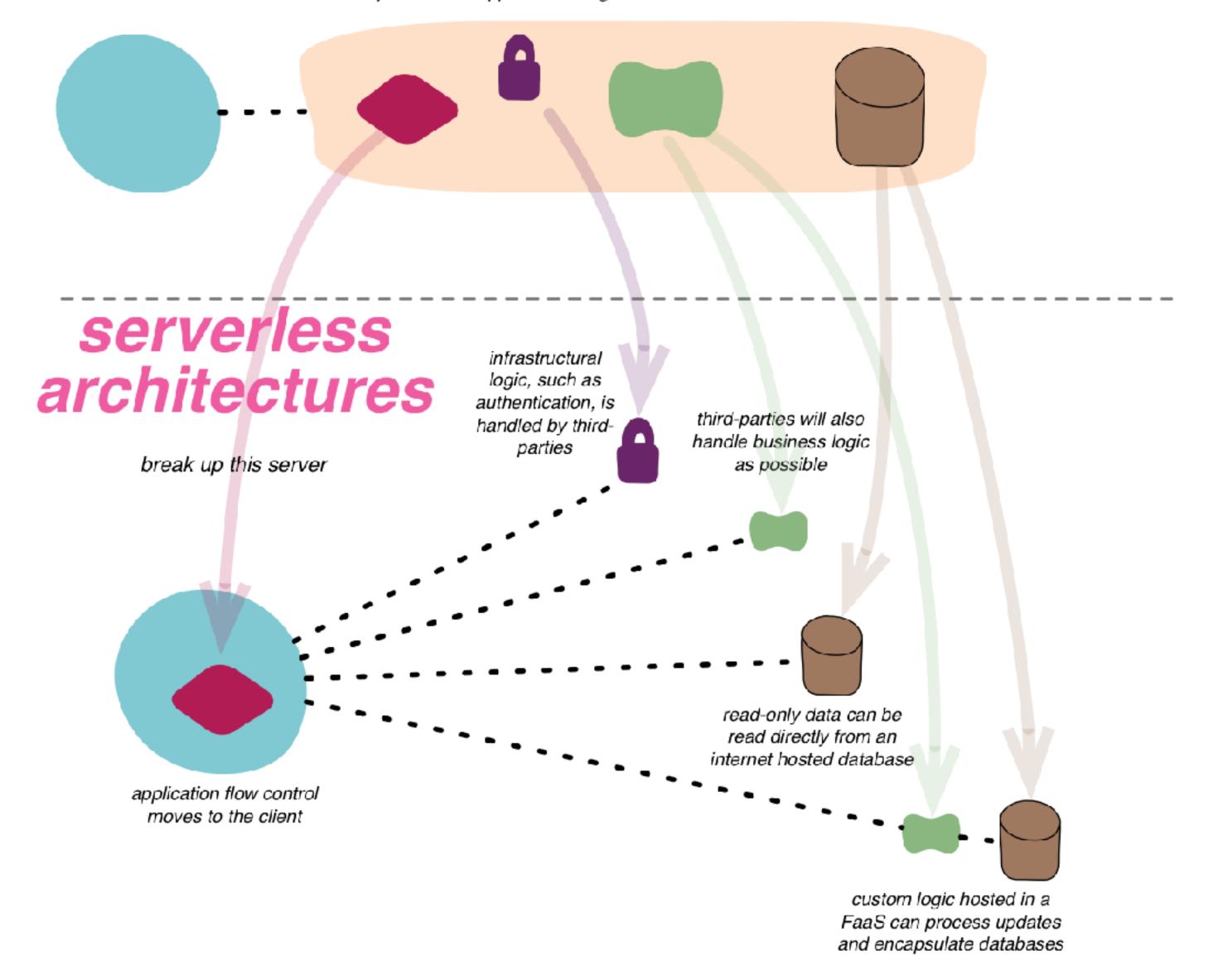
ACLOUD AND AN API WALK INTO ABAR

- AWS got started in 2002,
 Lambda added in 2014
- Roy Fielding defines REST in his 2000 PhD dissertation
- Twilio was founded in 2007;
 Stripe in 2011



Serverless Architectures

A traditional internet delivered app has a client communicating with a long-lived server process that handles most aspects of the application's logic



A NEW BREED OF STATIC SITE GENERATORS

Seamlessly combining static sites and single page applications





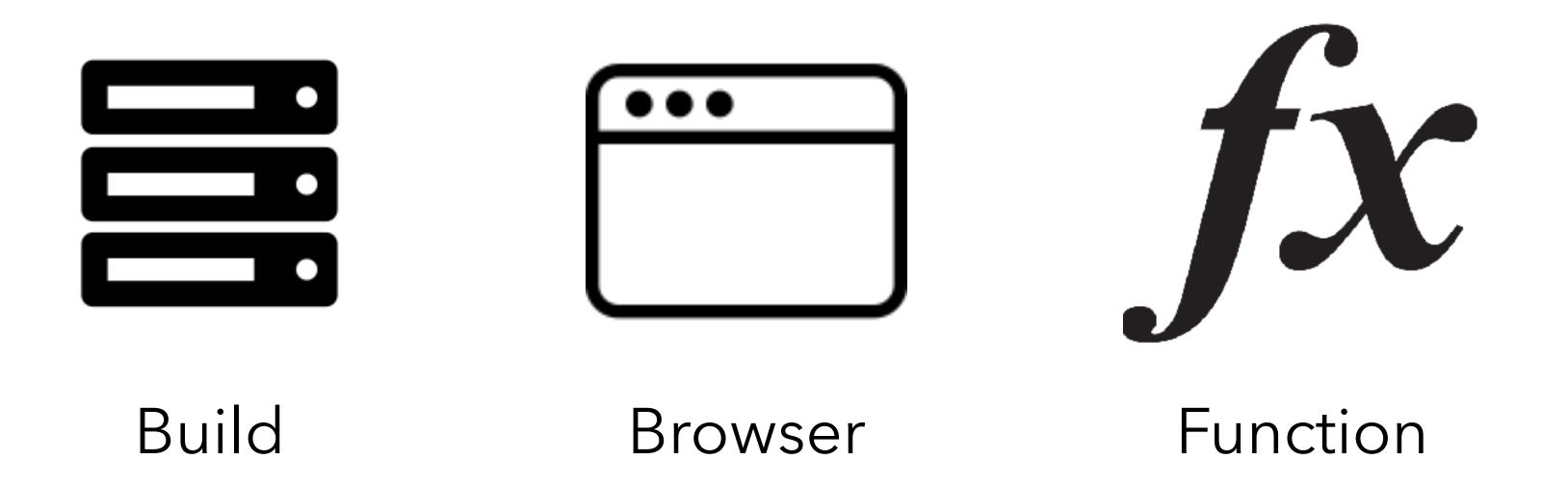
Blazing-fast static site generator for React

Universal Vue.js Applications

How does that solve anything?

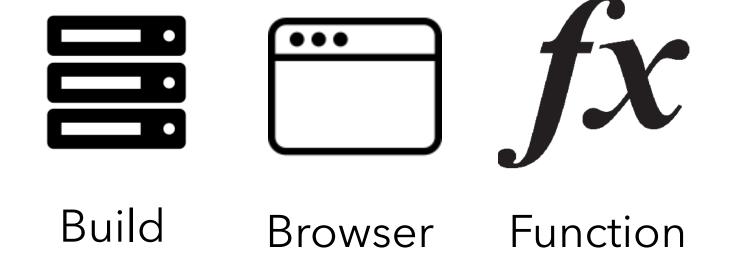
With great services

3 WAYS OF ACCESSING A SERVICE





A content infrastructure service - or a headless CMS - gives editors the graphical interface they need. You content becomes just an API.



Blog demo in Rouven Weßling



Space home

Cont



Seven Tips From Ernest Hemingwa

Title (required)

Seven Tips From Ernest Hemingway on How to Write

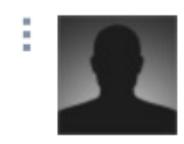
56 characters

Slug

seven-tips-from-ernest-hemingway-on-how-to-write-

The slug is auto-generated based on the entry title

Author (required)



Mike Springer

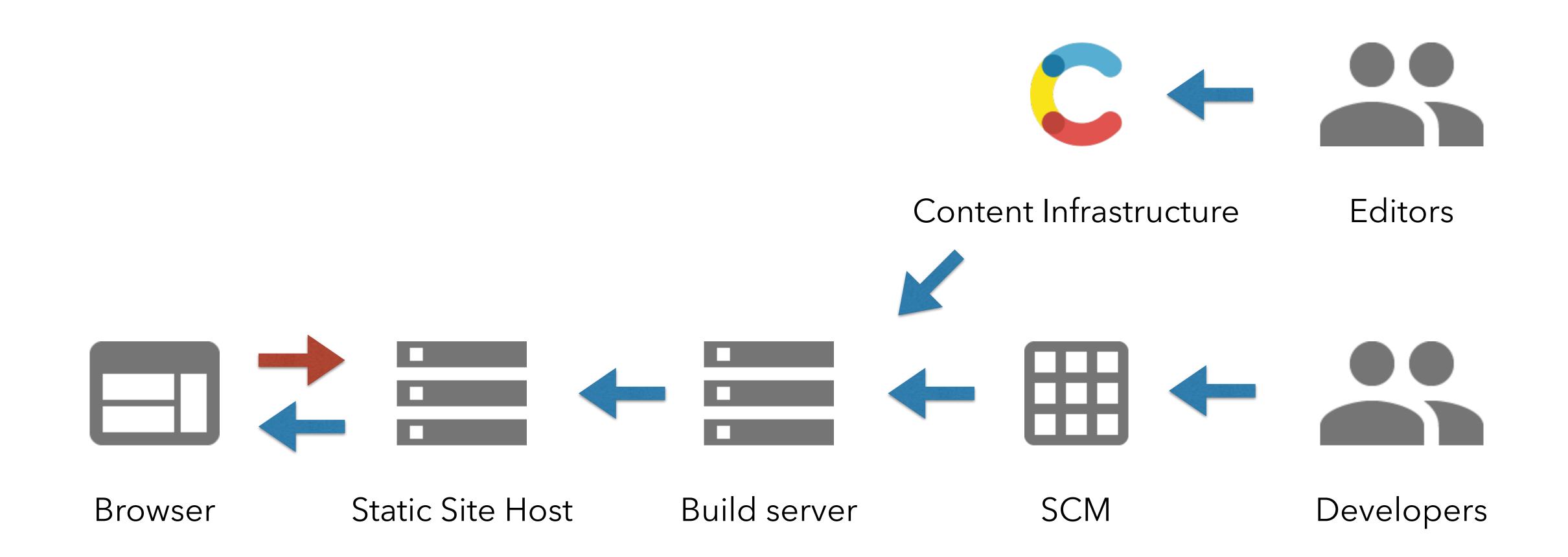
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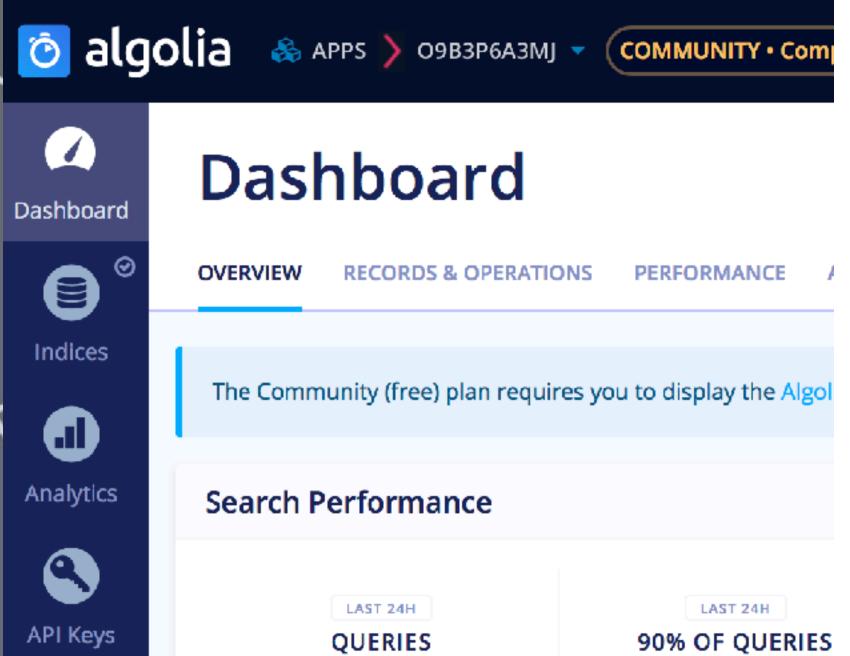
Create Author and link

Link existing entries

Body

Editor





Ca

Team

1ms

0ms

-1ms

1ms

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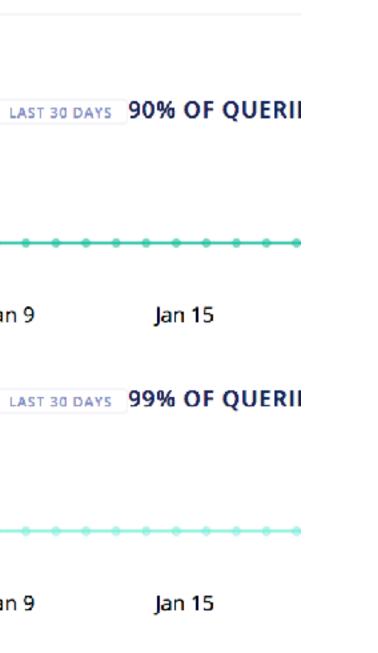
-1ms Jan 2

Jan 2

"We have a lot of content, we need full-text search."



Using a Search-as-a-Service provider not only saves you from running your own search infrastructure but also allows integrating multiple content providers into one search.

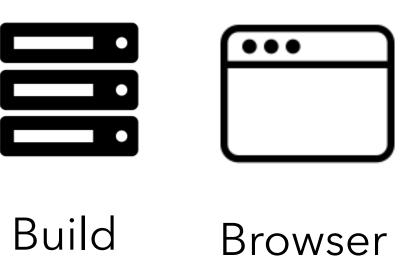


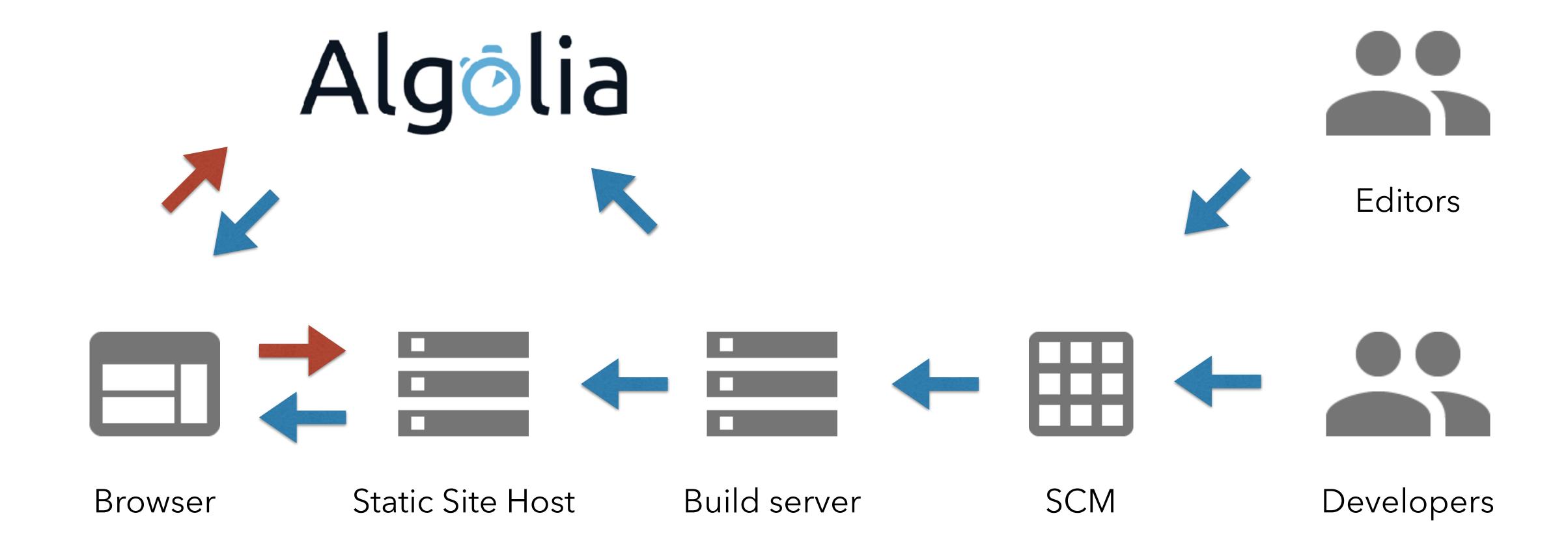
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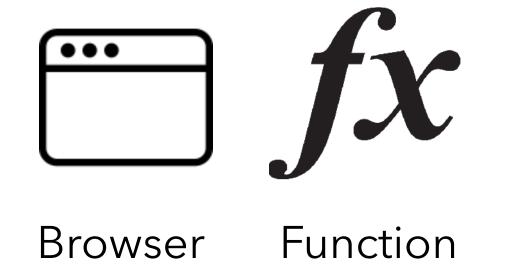


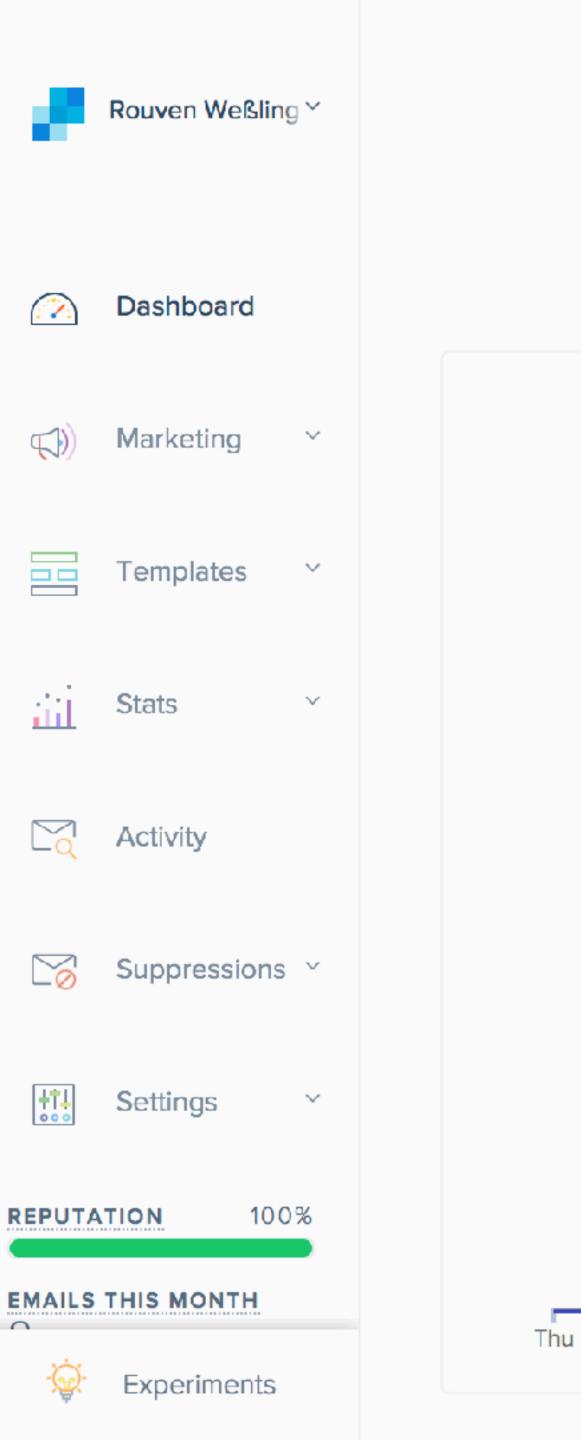
"Our contact forms needs to send an email."





Cloud email services are a de facto standard in modern architectures but they're not accessible from the client. A tiny bit of glue code hosted on a FaaS platform bridges the gap.

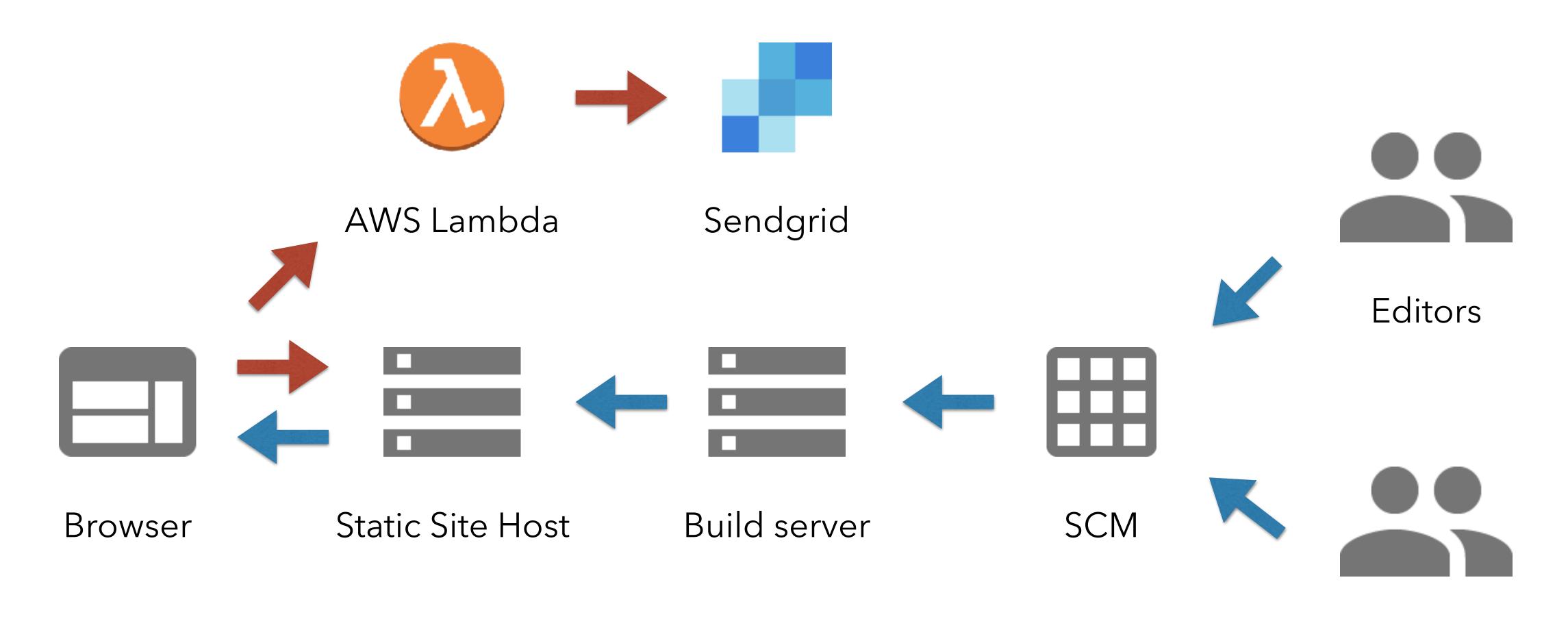




REQ

HOW TINY?

```
const sendGridConfig = {api user: 'SENDGRID USERNAME', api key: 'SENDGRID PASSWORD'};
const transporter = nodemailer.createTransport(sgTransport({auth: sendGridConfig}));
const sendMail = pify(transporter.sendMail);
exports.handler = function(event, context) {
  const templateDir = path.join( dirname, 'templates', event.template);
  const template = new EmailTemplate(templateDir);
  const render = pify(template.render);
 template.render(event.context)
    .then(result => {
      event.text = result.text;
      event.html = result.html;
      return sendMailAsync (event);
    .then(() => context.done(null, {message: 'Yaay success'})))
     catch(() => context.done(new Error('Something went wrong!')));
};
```



Developers



MANAGE STORE

- II DASHBOARD
- □ ORDERS
- ⊞ SUBSCRIPTIONS
- ₩ ABANDONED CARTS
- △ CUSTOMERS
- X DISCOUNTS
- PRODUCTS
- □ DIGITAL GOODS

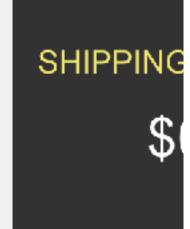


"We're running an online shop. You can't do that with a static site."



0

Combing a payment processing service and a shopping cart platform allows you to run your entire business off a static site.



SALES







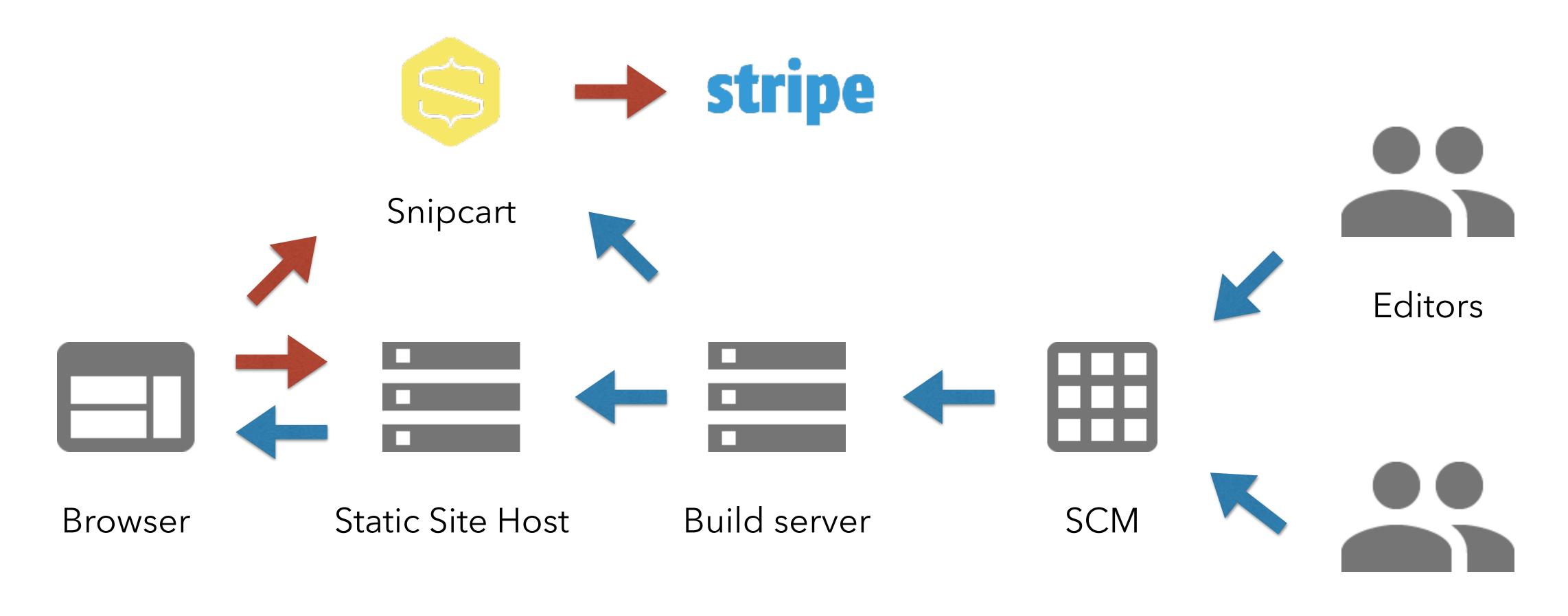
Build

Browser

Function

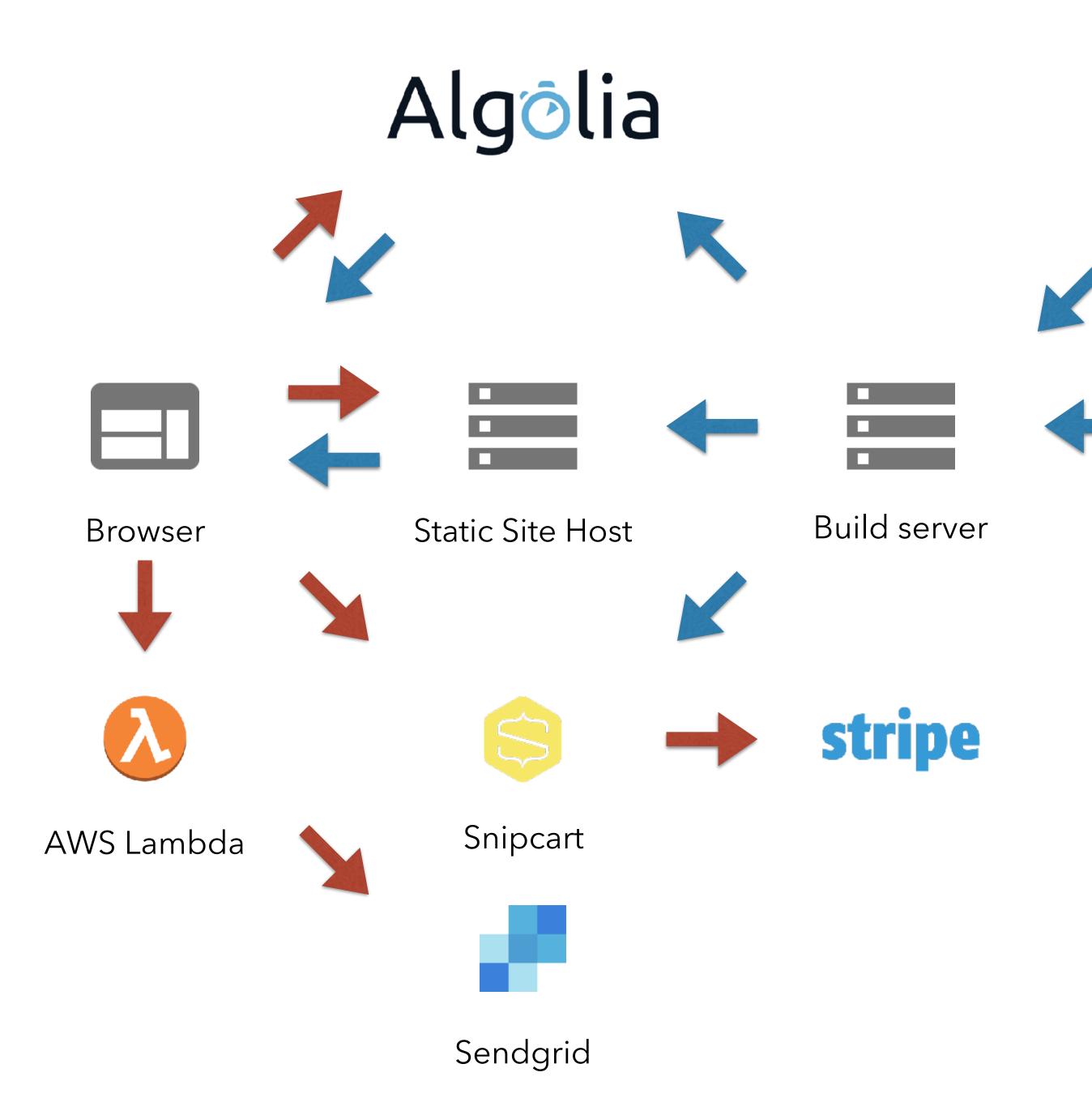
\$100.00-\$90.00-\$80.00-

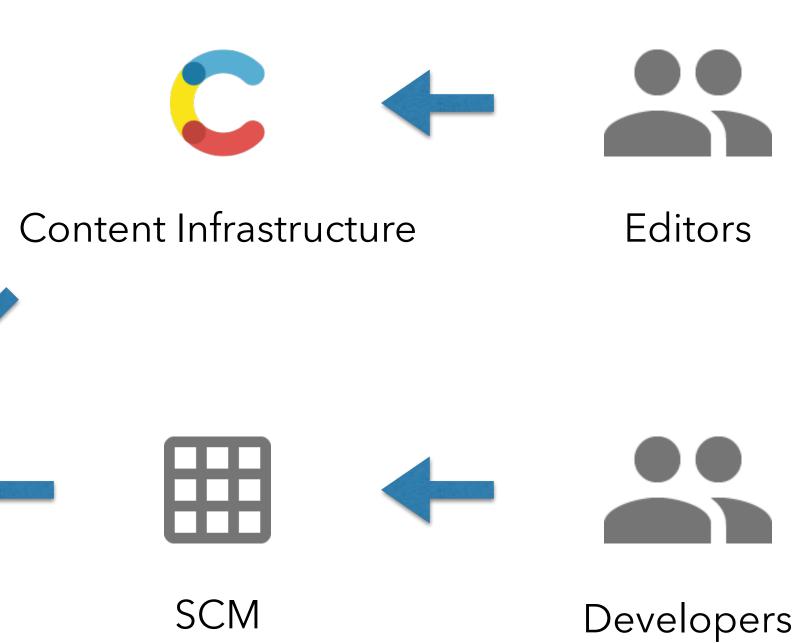
\$70.00



Developers

Bringing it all together





AND MANY MORE









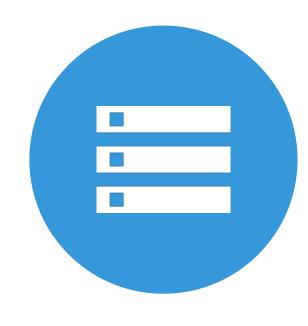


COMBINING STATIC SITES AND SERVERLESS



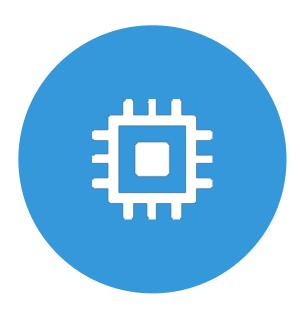
Isolated services improve security

Every dynamic function is a limited service with only the necessary permissions.



Easy caching

Dynamic resources are hidden behind APIs and well defined routes - everything else can be cached.



Great performance

Static things are instant; dynamic things are fast.



Easy maintenance

Most services can be handled by 3rd parties requiring no maintenance.



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He/Him

Slide Credit - @RouvenWessling