

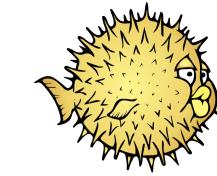
# DevOps

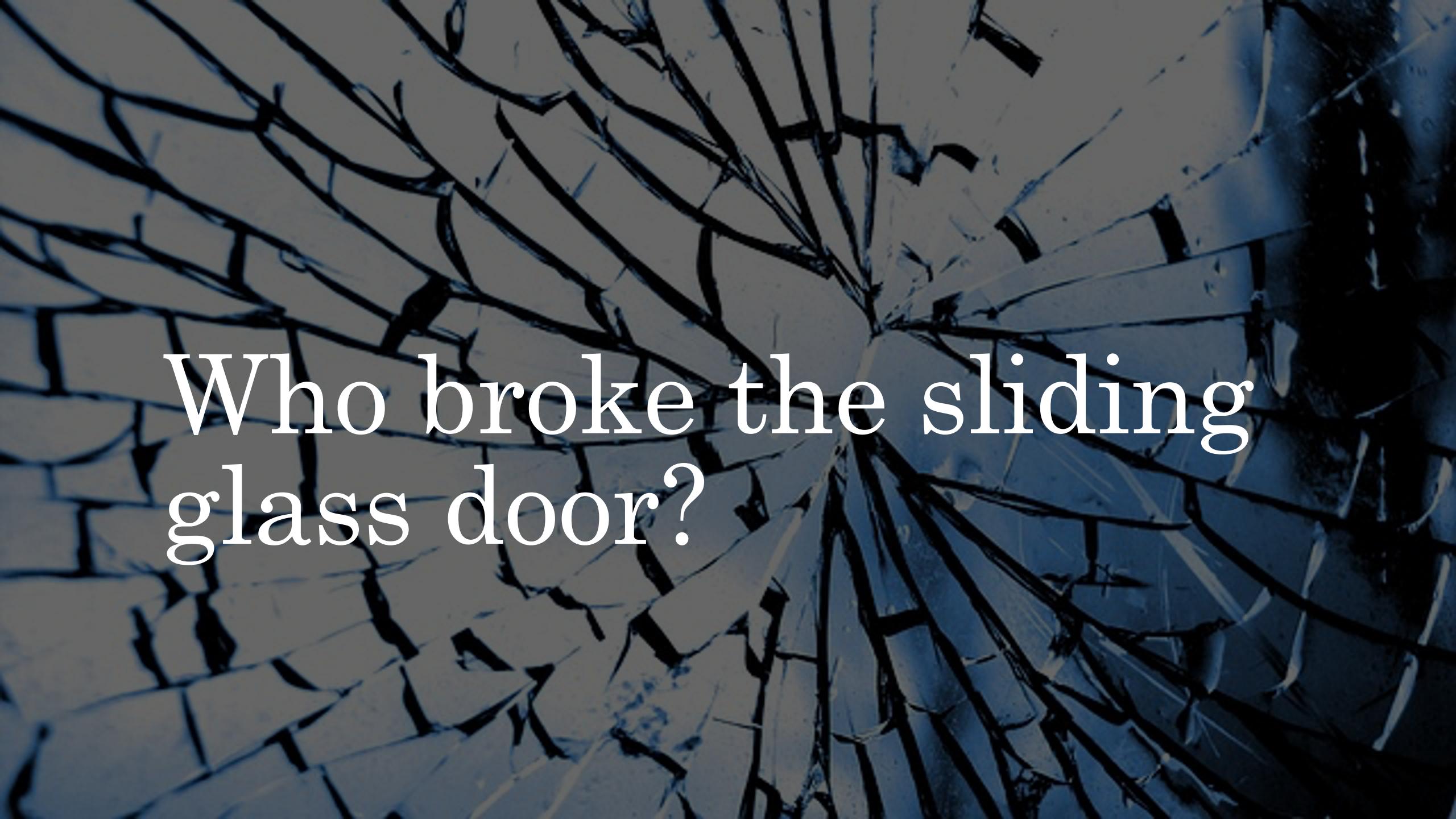
Ben Francom

[benfrancom.com](http://benfrancom.com)

# About

- 20+ years in industry
- Cut teeth on Linux and BSD's
- Systems Administration, Automation, DevOps
- Security and InfoSec
- Currently
  - Information Security and Risk Manager
  - Consulting work for a software consulting firm doing InfoSec and DevOps in AWS.
- BS, Computer Engineering Technology
- MS, Information Management
- Certs: CISSP, GPEN, GCSA, RHCE



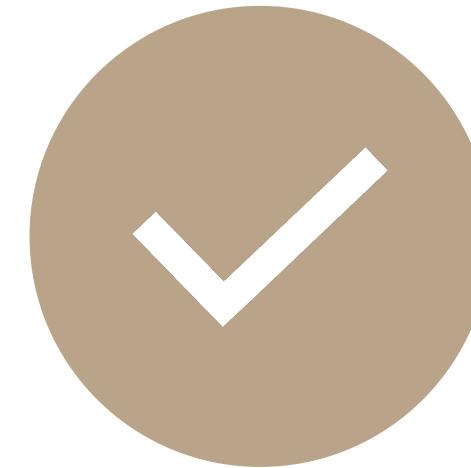


Who broke the sliding  
glass door?

# DevOps is Automating Stuff



INFRASTRUCTURE



REPETITIVE TASKS

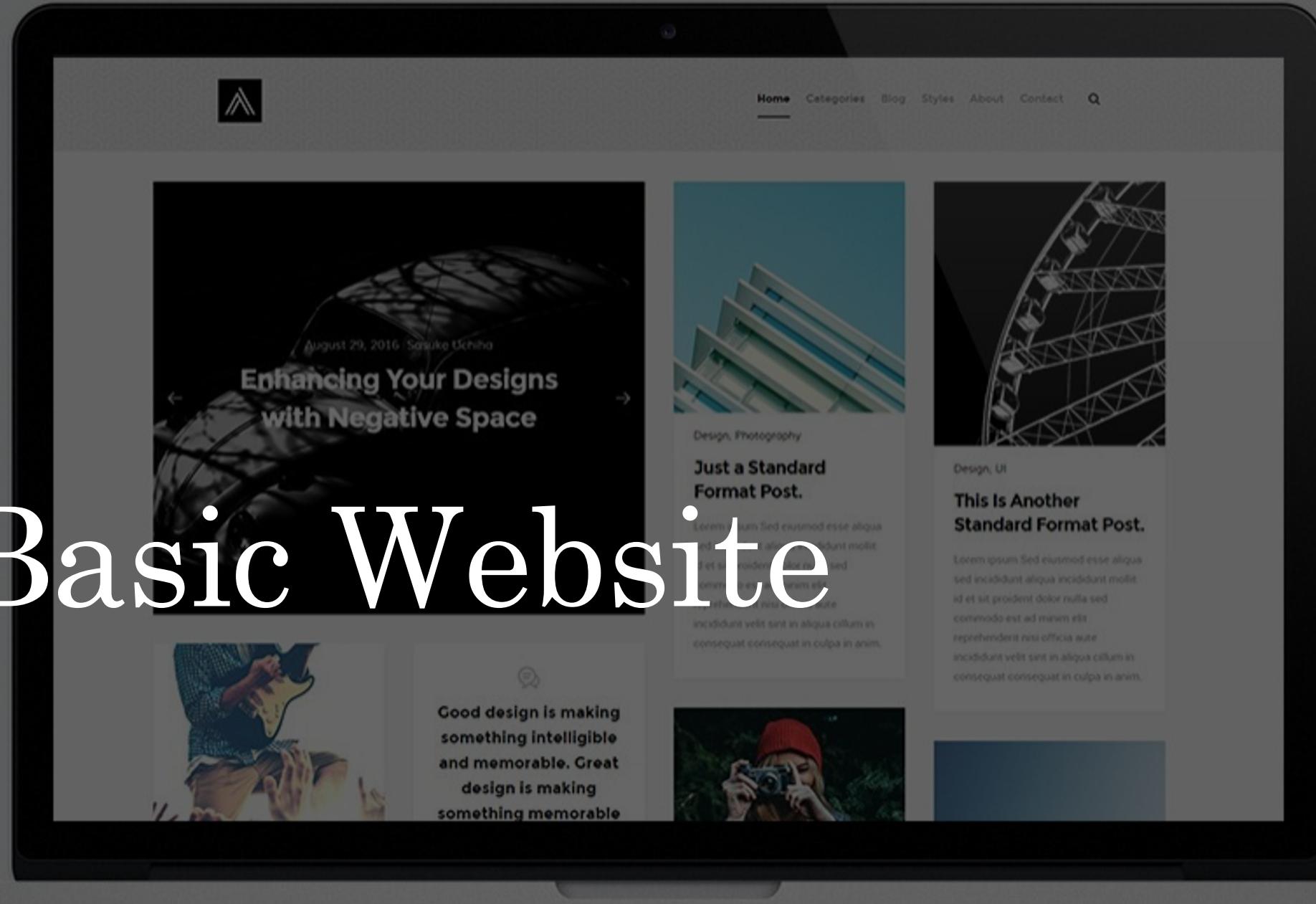
No "single"  
way to do  
things

Bash or PowerShell  
scripts

Terraform

Ansible/Salt/Chef/Puppet

# Basic Website



# What is Needed

- DVCS (GitHub)
- Host (Netlify)
- Custom DNS and Certificate (Cloudfront)

# Demo

- Template from <https://html5up.net>
- GitHub

# Modify and add to GitHub

- Edit index.html and customize
- Git init and add to GitHub

# Fine and Good...except

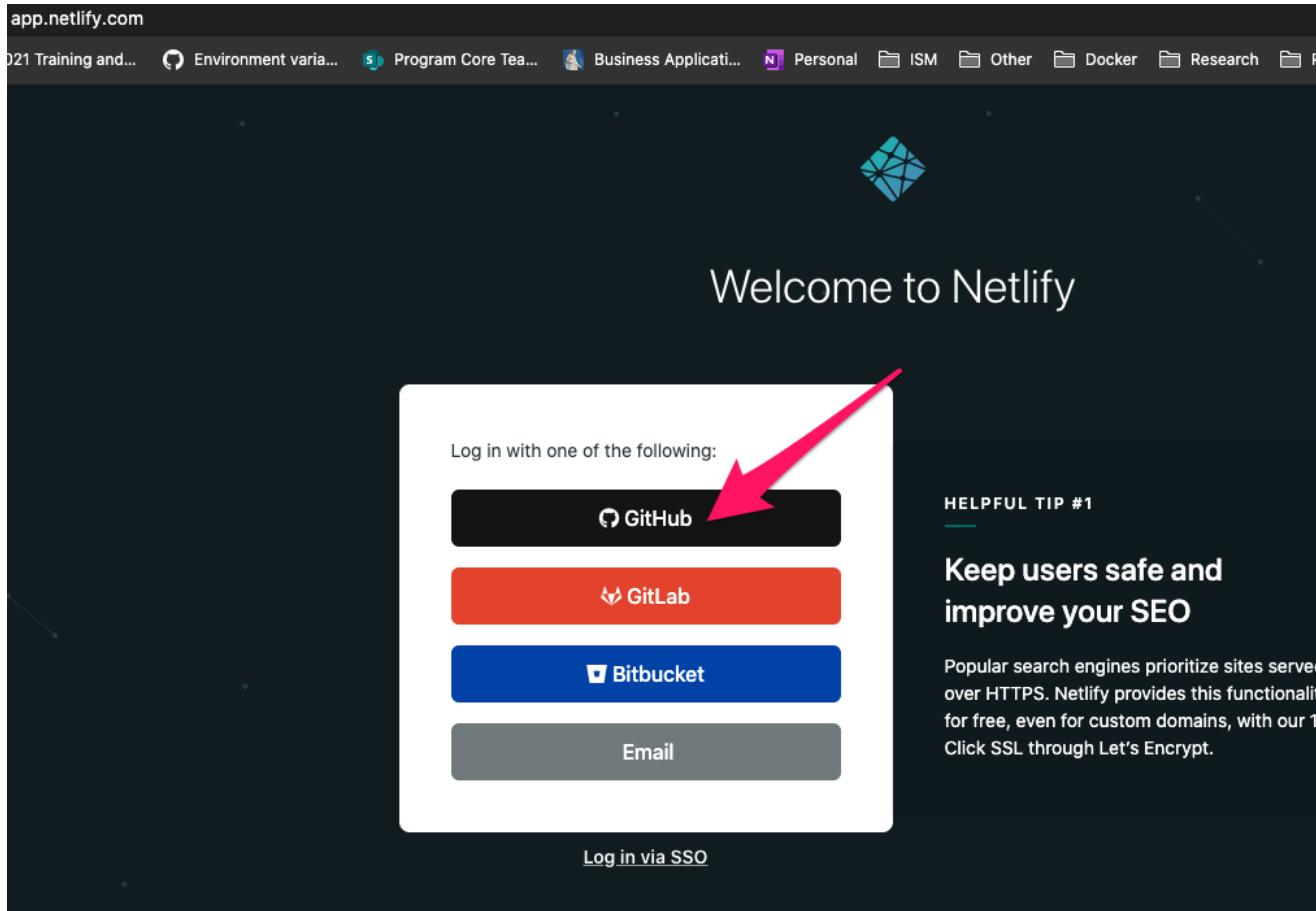
- We need a host
- Netlify
  - Built in FREE certs, easy to Integrate with other pipelines
  - Support for NodeJS, JavaScript, Ruby, Python



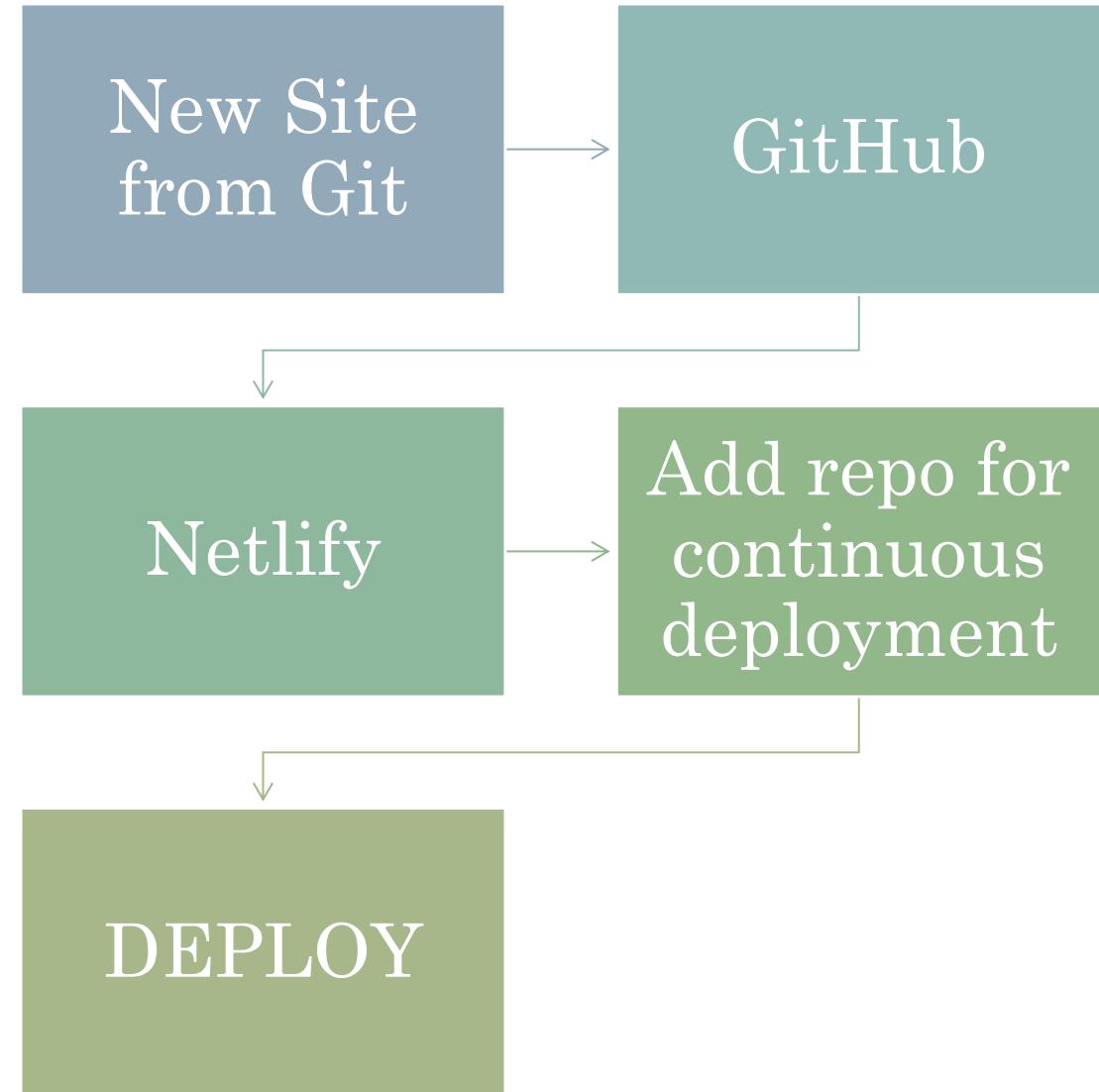
Price	Free	Free
Build Limits	10 Builds per hour	3 Builds per minute
Custom Domains with HTTPS	✓	✓
1-click Rollbacks	✗	✓
Asset Optimizations	✗	✓
Form Handling	✗	✓
Deploy Previews	✗	✓
Continuous Deployment	✗	✓
Custom Rewrites & Redirects	✗	✓
Compatible w/All Static Site Generators	✗	✓
Prerendering	✗	✓
Split Testing	✗	✓
Lambda Functions Integration	✗	✓

# Other Goodies

# Login to Netlify



# Steps



Verify it's  
working!





Demo

# What about the backend?

- This is the hypothetical use-case we are going to template out
  - Frontend in Netlify, Backend in AWS Fargate, and use GH Actions for CI/CD
- Shoot, we got to change it again! Get used to change, and tweaking configs like crazy.
- YAML will kill you. Use a linter built into your editor, or something like <https://yamlchecker.com/>
  - VIM: <https://www.arthurkoziel.com/setting-up-vim-for-yaml/index.html>

# GitHub Actions

- GitHub Actions: CI/CD Pipeline – FREE! (some limitations)
  - <https://github.com/features/actions>
- Our use-case:
  - Front-end in Netlify
  - Backend in AWS (Fargate ECS) – Beyond our scope today

```
bfrancom@A-1069455.local /tmp/bfrancom.github.io <main>
└─> mkdir -p .github/workflows
bfrancom@A-1069455.local /tmp/bfrancom.github.io <main>
└─> vim .github/workflows/pipeline.yml
```

Create file and directory structure

Code from:

<https://github.com/bfrancom/dummy-site/blob/master/.github/workflows/deploy.yml>

**General**

- Site details
- Status badges
- Site members
- Danger zone

**Build & deploy**

**Domain management**

**Analytics**

**Functions**

**Identity**

**Forms**

## Site details

General information about your site

### Site information

Site name:	reverent-swartz-2075d5
Owner:	bfrancom's team
API ID:	9069cb6b-db69-432a-a34b-e82689c18ac9
Created:	Today at 12:02 PM
Last update:	Today at 1:59 PM

# Add in creds for GH->Netlify

In your site in Netlify, get the API ID under General

## Personal access tokens

Create personal access tokens for use in shell scripts and API access.

### GitHub Actions

Created on Oct 19 (22 days ago)

### BzAccessTokensForGHActions

Created on Oct 21 (20 days ago)

### netlify-express-access-token

Created on Oct 22 (19 days ago)

### tempTokenOfDeath

Created on Nov 10 (19 hours ago)

New access token

# Generate Personal Access token (Netlify)

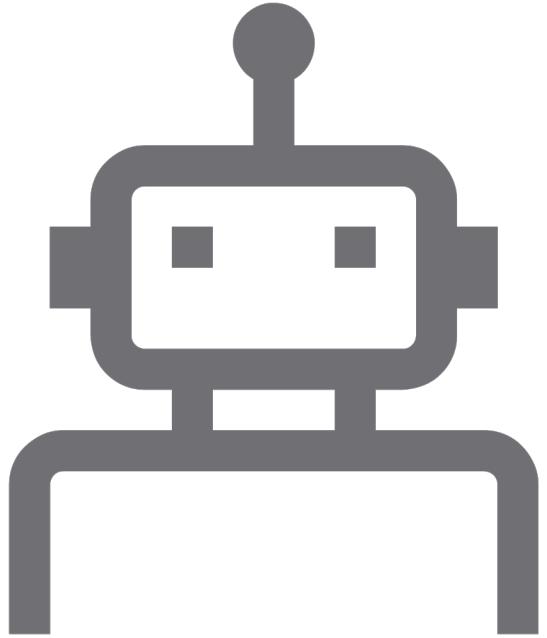
- <https://app.netlify.com/user/applications#personal-access-tokens>

# Add them into your secrets section (GH)

- In our GH workflow yaml file:
  - NETLIFY\_AUTH\_TOKEN: \${{ secrets.NETLIFY\_AUTH\_TOKEN }}
  - NETLIFY\_SITE\_ID: \${{ secrets.NETLIFY\_SITE\_ID }}
- Full yaml here:
  - <https://github.com/bfrancom/dummy-site/blob/master/.github/workflows/deploy.yml>

Stop auto builds  
via Netlify

Setup build and  
deploy from GH  
actions (YAML—  
AMADINGDONG)



Verify it's  
working!



Demo

# Completed Example

- <https://github.com/bfranc0m/dummy-site>



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# Setup DNS and Certs



# How to Win at DevOps (and Life)

## All workflows

All workflows				
Event	Status	Branch	Actor	Actions
migrating dev to GH actions	feat-dev-GH-action-signup	4 days ago	...	
Many tiny iterative tests for deploys	stage-ben-testing	9 days ago	Failure	
Many tiny iterative tests for deploys	stage-ben-testing	9 days ago	Failure	
Many tiny iterative tests for deploys	stage-ben-testing	9 days ago	30s	
Many tiny iterative tests for deploys	stage-ben-testing	9 days ago	Failure	
Many tiny iterative tests for deploys	feat-fix-Ghaction	10 days ago	1s	
Many tiny iterative tests for deploys	feat-fix-Ghaction	10 days ago	1s	
Many tiny iterative tests for deploys	feat-fix-Ghaction	10 days ago	1s	
Many tiny iterative tests for deploys	feat-fix-Ghaction	10 days ago	Failure	
more yaml fixing for GH action	feat-fix-Ghaction	10 days ago	Failure	
more yaml fix for GH action deploy	feat-fix-Ghaction	10 days ago	Failure	
fixing yaml	feat-fix-Ghaction	10 days ago	1s	
Put netlify build and deploy into GitHub action	dev	10 days ago	1s	

# Fail A LOT!!!

- Always be learning
  - Avoid distractions so you can focus deeply! Eg) Turn off your phone & Netflix!
  - Test stuff out, be curious
  - Cal Newport  
[\(http://calnewport.com/\)](http://calnewport.com/)

Always be  
learning

# Learn to Communicate

- Doesn't matter how smart you are if nobody can stand to be around you
- Ramit Sethi (Resume's, Interviewing, finance)
- Jordan Harbinger (6 minute networking)
- Jordan Peterson (Future Authoring)