WordPress as a Static Site Generator

Leon Stafford
Leon Stafford
36, BRISBANE

Sign: Aquarius

Passions: Open source, automation, low resource computing

Turn-offs: Insecurities (with your hosting), slow pageloads

Occupation: Founder, developer, support engineer @ wp2static.com

Seeking: Businesses having commitment issues with WordPress
What we'll be covering

- static websites
- wtf are they?
- eww, why would I want one?
- j/k, FOMO, how do I get one?
What is a static site?

static
dynamic
What is a static site?

<table>
<thead>
<tr>
<th>Static</th>
<th>Dynamic</th>
</tr>
</thead>
</table>

```html
1 <DOCTYPE html>
2 <html lang="en-AU">
3 <head>
4 <meta charset="UTF-8" />
5 <meta name="viewport" content="width=device-width, initial-scale=1" />
6 <meta name="apple-mobile-web-app-capable" content="yes" />
7 <title>WordCamp Brisbane 2018</title>
8 <link rel="profile" href="http://gmpg.org/xfn/11" />
9 <link rel="pingback" href="https://2018.brisbane.wordcamp.org/xmlrpc.php" />
10 <!--[if lt IE 9]>
12 <![endif]-->
13
15 <link rel='dns-prefetch' href='//s0.wp.com' />
16 <link rel='dns-prefetch' href='//secure.gravatar.com' />
17 <link rel='dns-prefetch' href='//s.w.org' />
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SweetAlert 2

A BEAUTIFUL, RESPONSIVE, CUSTOMIZABLE, ACCESSIBLE (WAI-ARIA) REPLACEMENT FOR JAVASCRIPT'S POPUP BOXES

ZERO DEPENDENCIES

Current version: v7.28.10 • Latest update: today • Downloads last month: 255,181

Pretty cool huh? SweetAlert2 automatically centers itself on the page and looks great no matter if you're using a desktop computer, mobile or tablet. It's even highly customizable, as you can see below!
<table>
<thead>
<tr>
<th>static</th>
<th>dynamic</th>
</tr>
</thead>
<tbody>
<tr>
<td>pre-generated</td>
<td>compiled on the fly</td>
</tr>
<tr>
<td>low-resource</td>
<td>resource-intensive</td>
</tr>
<tr>
<td>usable offline</td>
<td>online only</td>
</tr>
<tr>
<td>secure by default</td>
<td>needs security</td>
</tr>
<tr>
<td>secure</td>
<td>fast</td>
</tr>
<tr>
<td>--------</td>
<td>-------</td>
</tr>
</tbody>
</table>

Why would I want a static site?
Security

With no database, no PHP, there is very little attack vector left exposed
Performance

No such thing as a cache-miss
vs Caching

"Once a resource intensive operation is done, remember the outcome. The next time the same operation is requested, you can just give the result instead of doing that operation again."

--@brendt_gd (stitcher.io)
Cost effectiveness

Gratis

Netlify, GitHub/GitLab/BitBucket Pages, S3, Azure, GAE free tiers, Firebase, Neocities

Cheap

BunnyCDN, KeyCDN, OBSD Amsterdam, etc.
Cost to the environment

$40/month of hosting has to be paid by someone, selling something else, commuting to work, etc

Let's not waste energy on WordPress hamsters
Resilience

Activists / political refugees
Backends with benefits

Optionally, commit whole site snapshots under version control

When the fan gets dirty, instantly rollback while figuring out what went wrong
Website archival

Take a snapshot of a legacy client's site, keep hosting it for free (you're a good human!)

Forget about it - no WP updates, no application vulnerabilities
How to publish statically?

- wget
- httrack
- SiteSucker
- WP plugins
- Shifter
- Strattic
- HardyPress
- JAMstack + WP
The JAMstack

JavaScript  APIs  Markup

Use WordPress as a data-source for a static site generator like gatsby.js
Purely static vs dynamic elements

- contact forms
- comments
- search
- e-commerce
- user accounts
Static site generators

- gatsby.js
- Hugo
- VuePress
- Eleventy
- Jekyll
- Hyde
- Pelican
- Jigsaw

staticgen.com
Why we're not all using SSGs

- WP powering large chunk of web
- Ease of collaboration
- Opinionated workflows
- Command line fear
- WP admins can live in the browser
WordPress Static Site Generator
## Best of both worlds

<table>
<thead>
<tr>
<th>WordPress</th>
<th>WP SSG</th>
</tr>
</thead>
<tbody>
<tr>
<td>● collaboration</td>
<td>● security</td>
</tr>
<tr>
<td>● plugins</td>
<td>● performance</td>
</tr>
<tr>
<td>● community</td>
<td>● cost savings</td>
</tr>
<tr>
<td>● rapid development</td>
<td>● portability</td>
</tr>
</tbody>
</table>

WordPress: collaboration, plugins, community, rapid development

WP SSG: security, performance, cost savings, portability
WP Static Site Generator

Where will you host the static version of your site?
- On, Amazon S3, using this plugin's auto-deployment

Base URL
- http://mystaticsite.com

Access Key ID
- Access Key ID: AIAOSFDONINXAMPLE

Secret Access Key
- Secret Access Key: wJEYXUOHFM/K7MD5NQ/P8RJFCZMEPOKEY

Region
- Choose the AWS region your bucket was created in

Bucket
- S3 Bucket: my-static-site

Subdirectory
- Subfolder in your bucket: static-website

CloudFront Cache Invalidation
- CloudFront Distribution ID: ABC1230FFFX

If using CloudFront in your S3 static site setup, enter the CloudFront Distribution ID here and it will create an invalidation request for all files at the end of the deployment process. The invalidation usually happens within a few minutes. You can check any pending invalidations in your AWS Console's CloudFront page. You AWS user will need to have the CloudFrontFullAccess permissions or a more controlled policy that includes the ability to send CloudFront invalidation requests.

Upload Batch Size
- 1
WP Static Site Generator

Use relative URLs

URLs in the exported site will be rewritten as relative URLs, i.e., http://mydomain.com/some_dir/some_file.jpg will become /some_dir/some_file.jpg. A base href will be set to http://mydomain.com/, from which all the relative URLs resolve to. This is another way to shave extra download size from your webpages.

Write Base Href for relative URLs

A base href will be set to your new Base URL, from which all the relative URLs resolve to.

Path rewriting

In order to hide any trace that your site uses WordPress, the following paths will be rewritten. You can leave these default options in, but for more control, you can overwrite them.

Rewrite WP paths

- **WP content**
  - contents
  - original: wp-content

- **Theme root**
  - ui
  - original: themes

- **Theme**
  - theme
  - original: twentyseventeen

- **Uploads**
  - data
  - original: uploads

- **Plugins**
  - lib
  - original: plugins

- **WP Includes**
  - inc
  - original: wp-includes

Remove cruft

- Remove conditional comments within HEAD
### WP Static Site Generator

#### Diff-based deployment
- **Only deploy changed files since last export**
  
  As this works off of your last export, if you have changed the deployment method or settings since your last deployment, you may end up with missing files. In this case, uncheck this option, do one complete deployment with your new settings, then re-enable this to get faster deployments of changes only going forward.

#### Working Directory
- **Var/www/html/wp-content/uploads**
  
  The plugin will use this directory on the server for its working files and saving export cache. If the path you've given does not exist or isn't writable, it will default to

#### Crawl Increment
- **1**
  
  This is set to 1, by default, in order to allow exporting on low-resource environments, such as shared hosting servers. Each increment is the amount of files the server will try to process on each request that the browser sends it. Incrementing this will speed up your exports, by processing more are a time. If your export is failing, due to resource (memory, CPU) limits being reached, try setting this to a lower number.

#### Scheduled deploy
- **wp_static_html_output_server_side_export_hook**
  
  Using the WP Control plugin, you can add the following hook to a schedule to trigger an export. This will run your export using the settings you've saved via this screen. Using this method, you can schedule your exports to happen daily or if you've after an on-post publish kind of behaviour, you could set this to every few minutes.

  **Upgrade to the Professional Edition for programmatic access**

#### Redirect this domain to your static site?
- If you're happy with how your site is looking after exporting to a subdirectory, you can choose to start serving this content to your visitors, instead of your current WordPress site. To do this, you will need to adjust your `.htaccess` file. This [community guide](#) may be able to help you.

#### Email upon completion
- **Will send to: leonstafford@protonmail.com**
  
  Be alerted when your deployment process is complete.
WP Static Site Generator

Export your site | Crawling | Processing | Advanced Options | Help / Troubleshooting

Where will you host the static version of your site?
Test deploy - a sub-directory on this server

Target Folder to deploy to
mystaticsite

By exporting to a subfolder on your current server, you can check how it will look when published and make any adjustments needed. After the export, you should be able to see how your site looks in static HTML at: http://172.18.0.3/mystaticsite/

Start static site export | Save current options | Reset to default settings

Process completed in 0:02 (mins)

Go to my deployed site

Thank you for creating with WordPress
Optimisation addicts


/w/t/t/assets/images/images/header.jpg
Help on your static journey

Leon is active in several communities around static sites and is a guest on the next Static Bits episode.

leonstafford.github.io