

# Scaling WordPress

*with*

# Next.js

@colbyfayock

# Colby Fayock

Developer Advocate



@colbyfayock

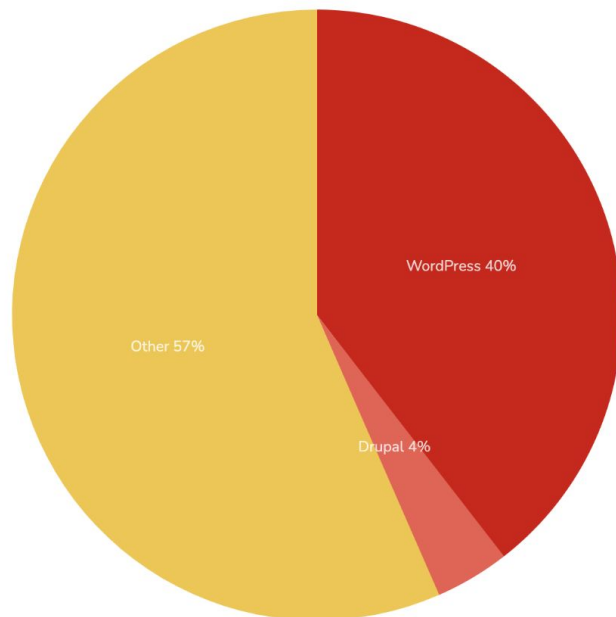




WORDPRESS

# CMS Usage Distribution in the Top 1 Million Sites

Distribution for websites using CMS technologies




[Explain Chart](#)

## Top In CMS Usage Distribution in the Top 1 Million Sites

Technology	Websites	%
 WordPress	346,776	34.68
 Drupal	34,573	3.46
 Google Search Appliance	25,782	2.58

## 876,862 Detections

of Content Management System in the Top 1 Million Sites. Last updated 26th May 2021.

 WordPress is currently the most popular technology in this category.

**Top 1m** 876,862

Top 1,000,000 sites by traffic

**Top 100k** 143,999

Top 100,000 sites by traffic

**Top 10k** 21,792

Top 10,000 sites by traffic

**Entire Internet** 63,596,048

 India 444,805

 United States 24,312,838

 Germany 2,618,150

 United Kingdom 2,019,342

 Russia 1,430,983

 Italy 889,070

 France 835,638

 Netherlands 783,992

 Canada 804,768

 Australia 675,790

 Brazil 535,143

 Spain 514,679

 Japan 435,872

 Poland 332,601

# illion Sites

## 876,862 Detections

of Content Management System in the Top 1 Million Sites. Last updated 26th May 2021.



WordPress is currently the most popular technology in this category.

Top 1m

876,862

Top 1,000,000 sites by traffic

Top 100k

143,999

Top 100,000 sites by traffic

Top 10k

21,792

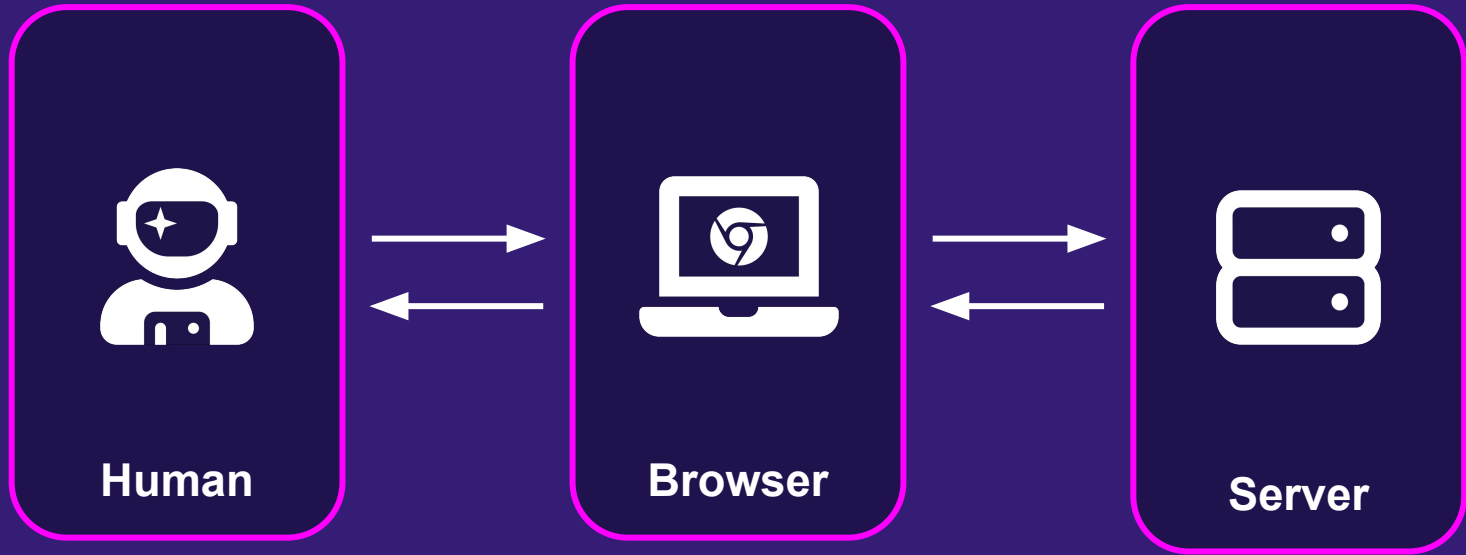
Top 10,000 sites by traffic



WORDPRESS

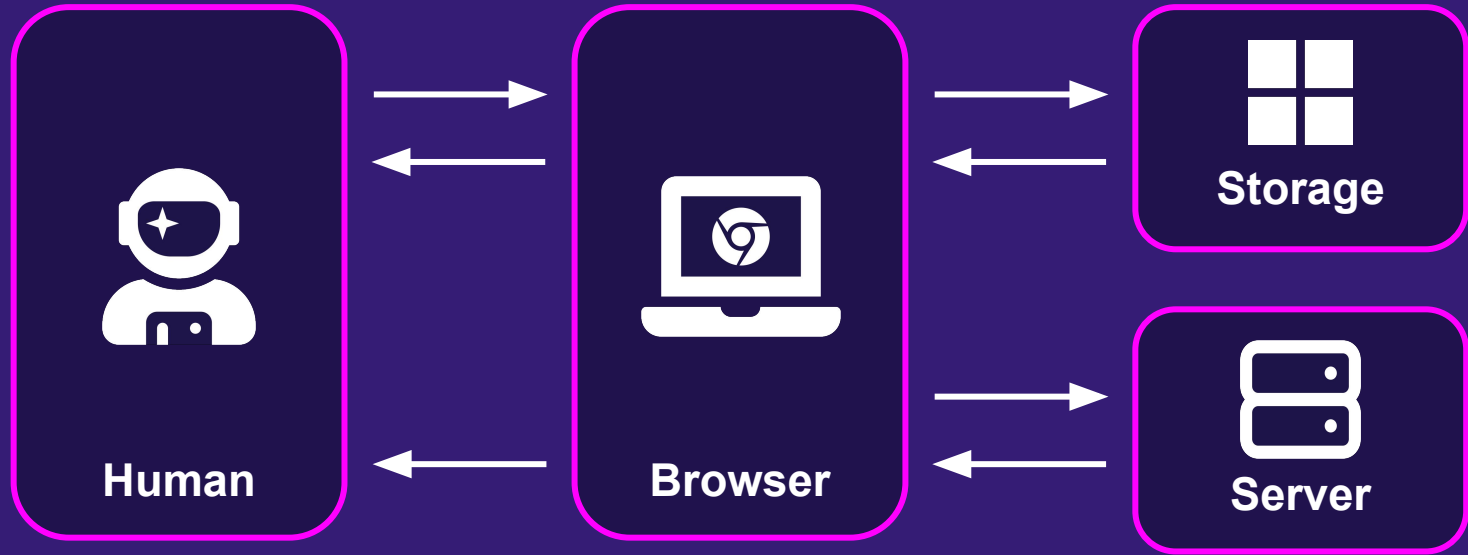
# What is “headless”?

# Traditional

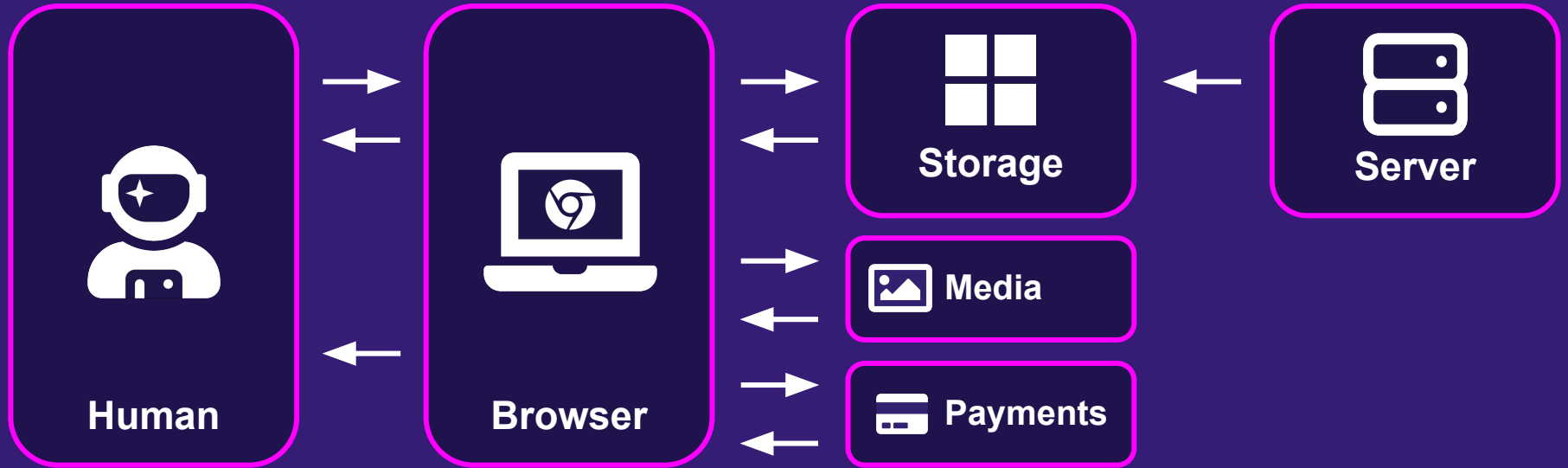




# Headless



# Headless + Static



# What is “Jamstack”?

# Jamstack



# Jamstack



**Why headless?**

**Why Jamstack?**

**Why not regular WordPress?**

# Jamstack



Operational  
Excellence



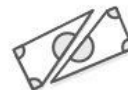
Security



Reliability



Performance  
Efficiency



Cost  
Optimization



**AWS Well-Architected**

# Performance

## Plugins

[My Favorites](#)[Beta Testing](#)[Developers](#)

Showing results for: **cache**



### LiteSpeed Cache

★★★★★ (1,169)

All-in-one unbeatable acceleration & PageSpeed improvement: caching, image/CSS/JS optimization...

LiteSpeed Technologies

1+ million active installations Tested with 5.5.1



### W3 Total Cache

★★★★★ (4,573)

Search Engine (SEO) & Performance Optimization (WPO) via caching. Integrated caching: CDN, Page, Minify, Object, Fragment, Database support.

BoldGrid

1+ million active installations Tested with 5.5.1



### WP Fastest Cache

★★★★★ (3,215)

The simplest and fastest WP Cache system

Emre Vona



WP-Optimize

### WP-Optimize – Clean, Compress, Cache.

★★★★★ (1,187)

Makes your site fast and efficient. It cleans the database, compresses images and caches pages. Cached sites attract more traffic and users.



# Performance

aws

Services

Resource Center

Search

Type a prefix and press Enter to search

Upload

Create folder

component---src-templates-

component---src-templates-

component---src-templates-

component---src-templates-

component---src-templates-

component---src-templates-

favicon.gif

index.html

resume.pdf

styles-f4fca833434e9b8756b5

styles-f4fca833434e9b8756b5

styles.31968c143acc1eddc48

webpack-runtime-ff7acf49e4

webpack-runtime-ff7acf49e4

webpack.stats.json

Elements

Console

Sources

Network

Performance

Memory

Application

Filter

Hide data URLs

All

XHR

JS

CSS

Img

Media

Font

Doc

WS

Blocked Requests

50 ms

100 ms

150 ms

200 ms

Name	Status	Type	Initi...	Size	Time	Wa
page-data.json	200	json	pref...	35.1 kB	45 ms	
component---src-templates-po...	200	javascript	pref...	2.3 kB	39 ms	
app-68985b05b0da25bf78b.js	200	script	(ind...	114 kB	36 ms	
styles-f4fca833434e9b8756b5.js	200	script	(ind...	486 B	34 ms	
gtm.js?id=GTM-NJ75NM&gtm_...	200	script	(ind...	28.9 kB	32 ms	
commons-c11b7f53e4e20f816...	200	script	(ind...	160 kB	30 ms	
page-data.json	200	json	(ind...	472 B	29 ms	
colby-fayock-bite-world.jpg	200	jpeg	(ind...	51.6 kB	29 ms	
colbyfayock.com.s3-website-u...	200	docum...	Other	72.3 kB	29 ms	
page-data.json	200	xhr	VM...	19.7 kB	28 ms	
page-data.json	200	xhr	VM...	19.7 kB	27 ms	
favicon-e7251aa0ffb9bcbef691...	200	png	Other	25.2 kB	27 ms	
page-data.json	200	xhr	VM...	35.1 kB	26 ms	
css?family=Source+Sans+Pro:...	200	stylesh...	(ind...	821 B	26 ms	
page-data.json	200	json	pref...	19.7 kB	24 ms	
component---src-pages-index-j...	200	script	(ind...	33.9 kB	24 ms	
webpack-runtime-ff7acf49e460...	200	script	(ind...	4.3 kB	23 ms	
app-data.json	200	xhr	VM...	390 B	23 ms	
page-data.json	200	xhr	VM...	35.1 kB	23 ms	
analytics.js	200	script	gtm...	18.4 kB	13 ms	
collect?v=1&_v=j85&a=408353...	200	gif	anal...	61 B	12 ms	

Elements

Console

Sources

Network

Performance

Memory

Application

Filter

Hide data URLs

All

XHR

JS

CSS

Img

Media

Font

Doc

WS

Blocked Requests

50 ms

100 ms

150 ms

200 ms

250 ms

Name	Status	Type	Initi...	Size	Time	Wa
app-68985b05b0da25bf78b.js	200	script	(ind...	114 kB	36 ms	
page-data.json	200	json	(ind...	472 B	29 ms	
commons-c11b7f53e4e20f816...	200	script	(ind...	160 kB	30 ms	
gtm.js?id=GTM-NJ75NM&gtm_cookies_...	200	script	(ind...	28.9 kB	32 ms	
colbyfayock.com.s3-website-us-east-1.a...	200	docum...	Other	72.3 kB	29 ms	
page-data.json	200	json	(ind...	472 B	29 ms	
styles-f4fca833434e9b8756b5.js	200	script	(ind...	486 B	34 ms	
colby-fayock-bite-world.jpg	200	jpeg	(ind...	51.6 kB	29 ms	
page-data.json	200	json	(ind...	472 B	29 ms	
css?family=Source+Sans+Pro:400,600,700	200	stylesh...	(ind...	821 B	26 ms	
component---src-pages-index-js-e09aeb...	200	script	(ind...	33.9 kB	24 ms	
page-data.json	200	json	(ind...	472 B	29 ms	
favicon-e7251aa0ffb9bcbef691127fb85c...	200	png	Other	25.2 kB	27 ms	
app-data.json	200	xhr	VM...	390 B	23 ms	
analytics.js	200	script	gtm...	18.4 kB	13 ms	
collect?v=1&_v=j85&a=1341425568&t=p...	200	gif	anal...	61 B	12 ms	
component---src-templates-post-js-a76...	200	script	(ind...	4.3 kB	23 ms	

Headers

Preview

Response

Initiator

T

General

Request URL: http://colbyfayock.com.s3-website-us-east-1.amazonaws.com/

Request Method: GET

Status Code: 200 OK

Remote Address: 52.216.143.163:80

Referrer Policy: no-referrer-when-downgrade

Response Headers

Content-Length: 71955

Content-Type: text/html

Date: Mon, 07 Sep 2020 02:04:44 GMT

ETag: "b8f7bd3c920771bda901ccecef75a05f"

Last-Modified: Wed, 19 Feb 2020 00:54:41 GMT

Server: AmazonS3

x-amz-id-2: LHyo2tTtthb5rweDtkf1J43NM5Poz...

x-amz-request-id: BCA69B162EE48601

Request Headers

Accept: text/html,application/xhtml+xml,application/xml;q=0.8,application/signed-exchange;v...

Accept-Encoding: gzip, deflate, br

Accept-Language: en-US,en;q=0.9

Feedback

English (US)

@colbyfayock

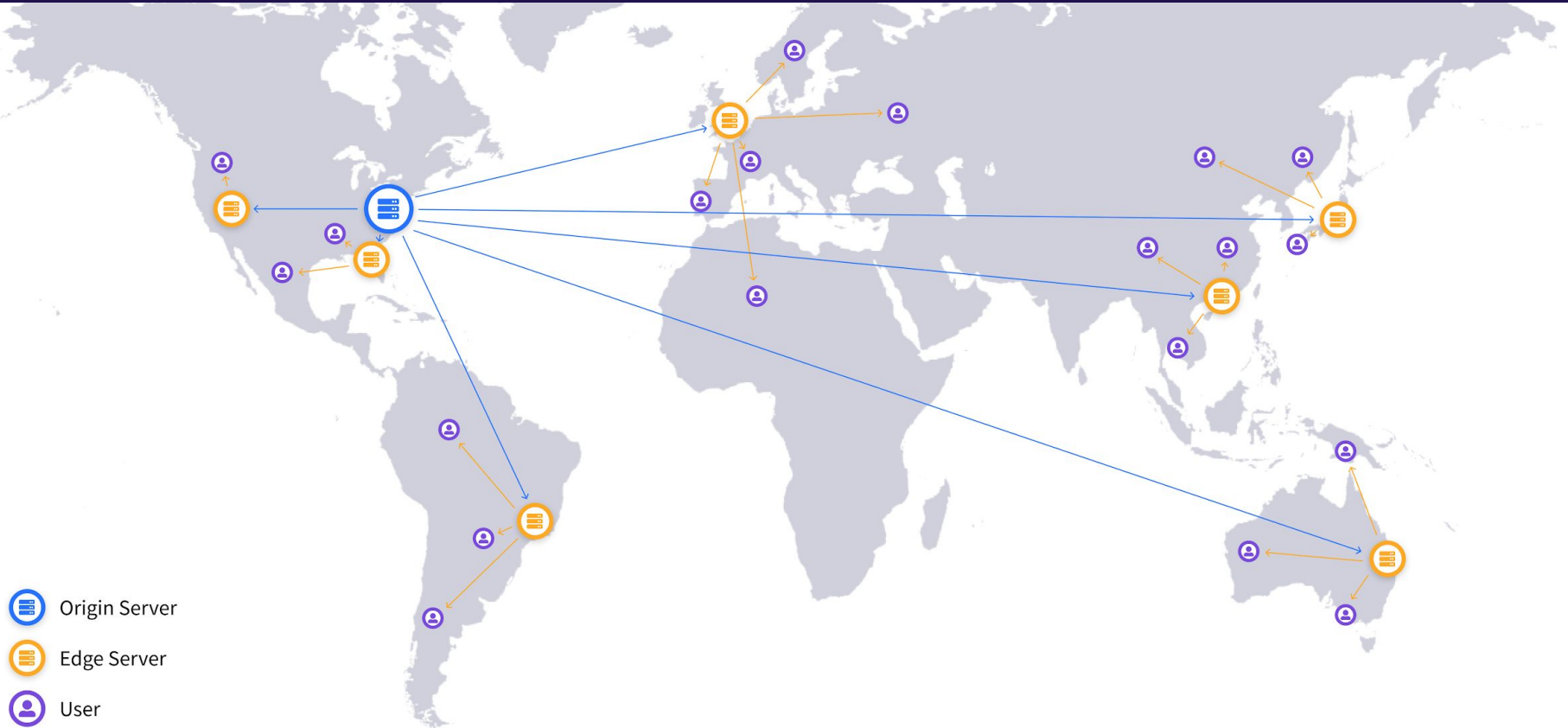
# Reliability

## 5xx SERVER ERROR

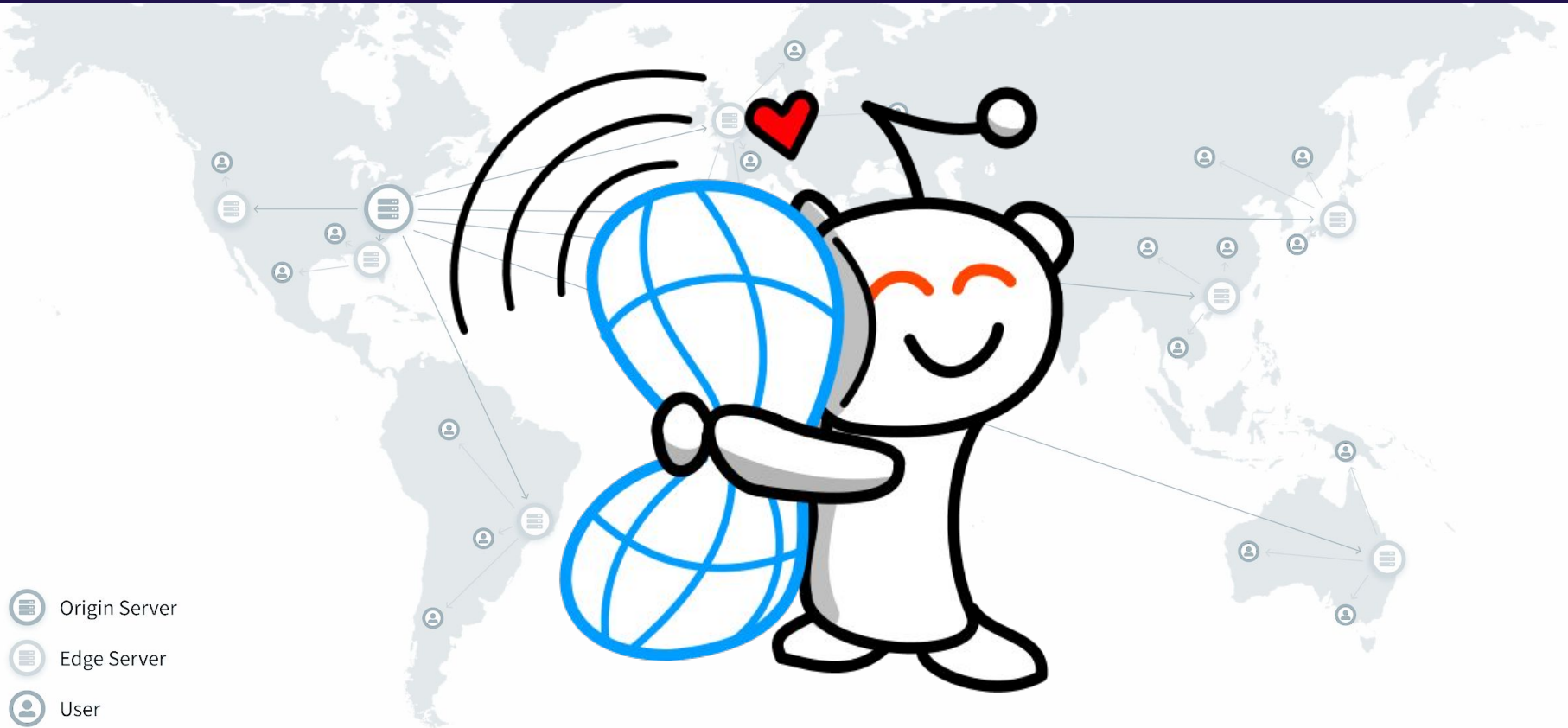
### 503 SERVICE UNAVAILABLE

The server is currently unable to handle the request due to a temporary overload or scheduled maintenance, which will likely be alleviated after some delay.

# Reliability



# Reliability



# Cost

Choose your instance plan [?](#)

**New!** Check out our new 16 GB and 32 GB RAM bundles!

Sort by: **Price per month** Memory Processing Storage Transfer



Amazon Lightsail

First month free!

\$3.5

USD

\$5

USD

\$10

USD

\$20

USD

\$40

USD

>

\$3.50 USD	\$5 USD	\$10 USD	\$20 USD	\$40 USD	Price per month
512 MB	1 GB	2 GB	4 GB	8 GB	Memory
1 vCPU	1 vCPU	1 vCPU	2 vCPUs	2 vCPUs	Processing
20 GB SSD	40 GB SSD	60 GB SSD	80 GB SSD	160 GB SSD	Storage
1 TB	2 TB	3 TB	4 TB	5 TB	Transfer

# Cost

## Storage pricing

**S3 Standard** - General purpose storage for any type of data, typically used for frequently accessed data

First 50 TB / Month	\$0.023 per GB
---------------------	----------------

Next 450 TB / Month	\$0.022 per GB
---------------------	----------------

Over 500 TB / Month	\$0.021 per GB
---------------------	----------------

	PUT, COPY, POST, LIST requests (per 1,000 requests)	GET, SELECT, and all other requests (per 1,000 requests)	Lifecycle Transition requests (per 1,000 requests)	Data Retrieval requests (per 1,000 requests)	Data retrievals (per GB)
<b>S3 Standard</b>	\$0.005	\$0.0004	n/a	n/a	n/a

# Why “headless” WordPress?

# What's WordPress good at?

## User Experience



# What's WordPress good at?

User Experience

**Familiarity**

# What's WordPress good at?

User Experience

Familiarity

Ecosystem

# **How about WordPress?!**

# WordPress API

[Showcase](#) [Themes](#) [Plugins](#) [Mobile](#) [Support](#) [Get Involved](#) [About](#) [Blog](#) [Hosting](#)[Get WordPress](#)

## REST API Handbook



### CHAPTERS

#### REST API Handbook

[Key Concepts](#)[Frequently Asked Questions](#)[Using the REST API](#)[Extending the REST API](#)[Endpoint Reference](#)

Browse: [Home](#) / REST API Handbook

## REST API Handbook

[Edit](#)

The WordPress REST API provides an interface for applications to interact with your WordPress site by sending and receiving data as [JSON](#) (JavaScript Object Notation) objects. It is the foundation of the [WordPress Block Editor](#), and can likewise enable your theme, plugin or custom application to present new, powerful interfaces for managing and publishing your site content.

Using the WordPress REST API you can create a plugin to provide an entirely new admin experiences for WordPress, build a brand new interactive front-end experience, or bring your WordPress content into completely separate applications.

### TOPICS

[What Is A REST API?](#)[Using the WordPress REST API](#)[Next Steps](#)

# WPGraphQL

W

Next.js WordPress Starter

0

+

New

2

GraphQL IDE

Howdy, Colby Fayock

WP Engine

Dashboard

Posts

Media

Pages

Comments

Appearance

Plugins

Users

Tools

Settings

SEO 2

GraphQL

Settings

GraphQL IDE

Collapse menu

Explorer

last:

where:

edges

cursor

node

author

authorDatabaseId

authorId

categories

commentCount

commentStatus

comments

content

contentType

databaseId

date

dateGmt

desiredSlug

editingLockedBy

enclosure

enqueuedScripts

enqueuedStylesheets

excerpt

format:

featuredImage

featuredImageDatabaseId

featuredImageId

guid

id

isPreview

isRestricted

GraphQL

Play

Prettify

History

Explorer

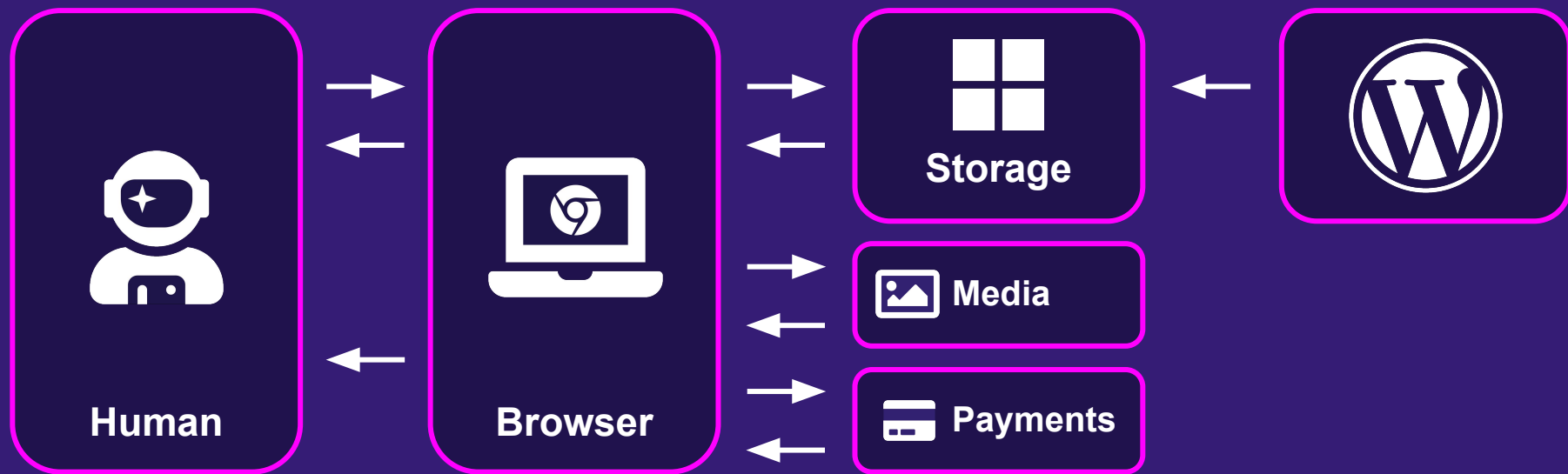
Code Exporter

```
1 query MyQuery {
2   posts {
3     edges {
4       node {
5         title
6         uri
7         excerpt
8       }
9     }
10  }
11 }
12
```

```
{
  "data": {
    "posts": {
      "edges": [
        {
          "node": {
            "title": "How to Manage SEO in Headless WordPress with Yoast SEO and WPGraphQL",
            "uri": "/2021/05/10/how-to-manage-seo-in-headless-wordpress-with-yoast-seo-and-wpgraphql/",
            "excerpt": "<p>SEO is a critical part of any website or application. Without it, Google might not be able to find your page or it might not look right in search results or social platforms. How can we leverage popular WordPress plugin Yoast SEO using a headless WordPress instance with Next.js and WPGraphQL? Note: this was originally [hellip];</p>\n"
          }
        },
        {
          "node": {
            "title": "How to Create a Headless WordPress Blog with Next.js WordPress Starter",
            "uri": "/2021/04/30/how-to-create-a-headless-wordpress-blog-with-next-js-wordpress-starter/",
            "excerpt": "<p>Blogs are a great way to get down your thoughts to help others learn, keep track of progress, or even to help reinforce an idea to help yourself learn. WordPress is a popular blog platform that's been around for a while and Next.js is a modern popular web framework for building React apps. How can [hellip];</p>\n"
          }
        }
      ]
    }
  }
}
```

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# Static WordPress



# Static WordPress

Next.js WordPress Starter

Docs

About

GitHub

wordpress

## Next.js WordPress

Scaling WordPress to the static web!

How to Create a Headless WordPress Blog with Next.js WordPress Starter

How to Manage SEO in Headless WordPress with Yoast SEO and WPGraphQL

### How to Create a Headless WordPress Blog with Next.js WordPress Starter



By Colby Fayock

April 30th, 2021

Getting Started and more

Blogs are a great way to get down your thoughts to help others learn, keep track of progress, or even to help reinforce an idea to help yourself learn. WordPress is a popular blog platform that's been around for a while and Next.js is a modern popular web framework for building React apps. How can...

@colbyfayock

# Static WordPress

```
export async function getStaticProps() {
  const { posts } = await getAllPosts()
  return {
    props: {
      posts: posts.sort((post) => (post
    },
  };
}
```

```
export default function Home({ posts }) {
  const { metadata = {} } = useSite();
  const { title, description } = metadata
```

```
/**
 * getAllPosts
 */
export async function getAllPosts(options) {
  const apolloClient = getApolloClient()

  const data = await apolloClient.query({
    query: QUERY_ALL_POSTS,
  });

  const posts = data?.data.posts.edges

  return {
    posts: Array.isArray(posts) ? posts : []
  }
}
```



# Static WordPress

```
export async function getStaticPaths() {
  const { posts } = await getAllPosts();

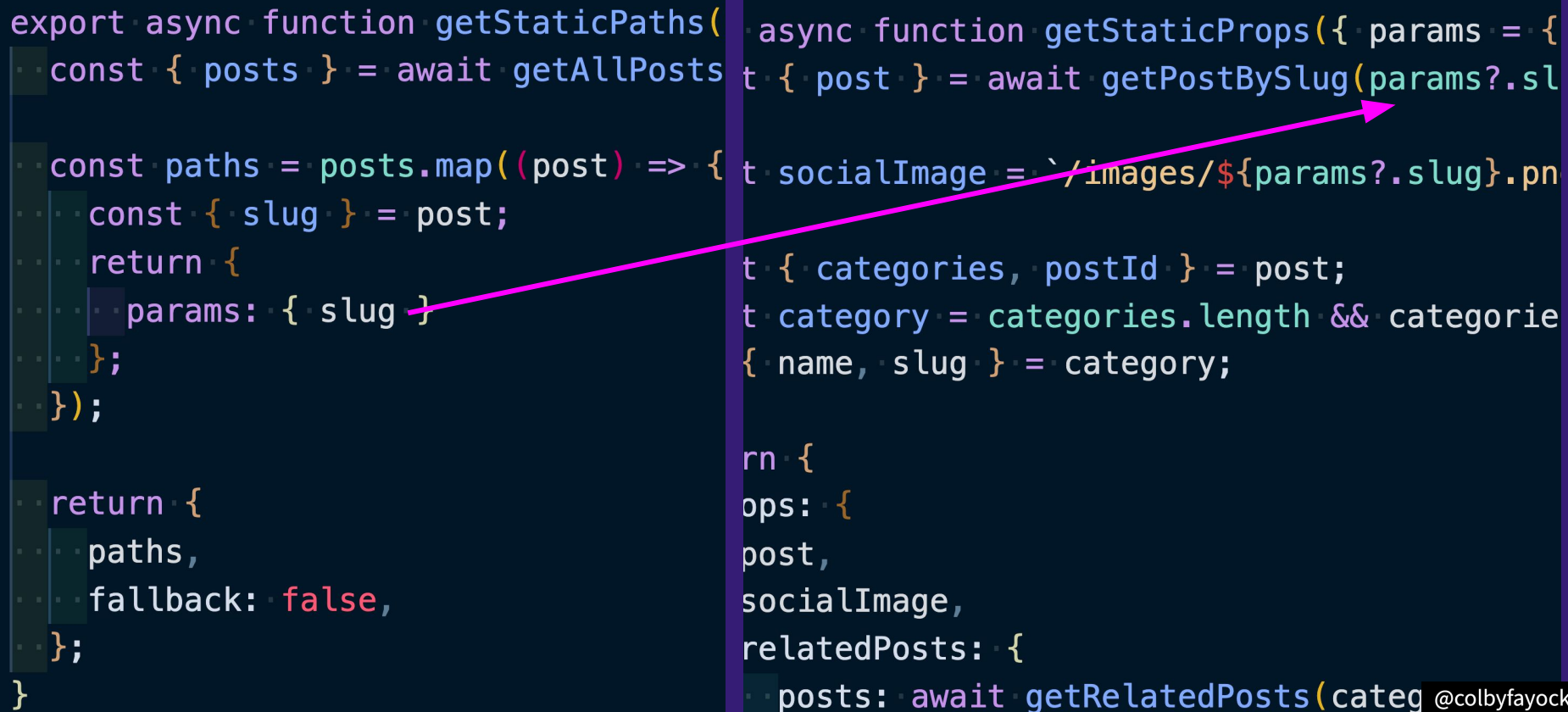
  const paths = posts.map((post) => {
    const { slug } = post;
    return {
      params: { slug },
    };
  });

  return {
    paths,
    fallback: false,
  };
}

export async function getStaticProps({ params = {} }) {
  const { post } = await getPostBySlug(params?.slug);
  const socialImage = `/images/${params?.slug}.png`;

  const { categories, postId } = post;
  const category = categories.length && categories[0];
  const { name, slug } = category;

  return {
    props: {
      post,
      socialImage,
      relatedPosts: {
        posts: await getRelatedPosts(category.slug, postId),
      },
    },
  };
}
```



# Static WordPress

```
module.exports = function indexSearch 10
const { env, outputLocation, output 11
const { WORDPRESS_HOST } = env; 12

return Object.assign({}, nextConfig 14
  webpack(config) { 15
    config.plugins.push(new Search] 16
    host: WORDPRESS_HOST, 17
    outputLocation, 18
    outputName 19
  }); 20

return config; 21
  } 22
}); 23

} 24

} 25

} 26

} 27

} 28

} 29

} 30

} 31

} 32

} 33

} 34

} 35

class SearchIndexWebpackPlugin { 1
  constructor(options = {}) { 2
    this.options = options; 3
  } 4

  async index(compilation, options) { 5
    const { 6
      host, 7
      outputDirectory = DEFAULT_OUTPUT_DIRECTORY, 8
      outputName = DEFAULT_OUTPUT_NAME 9
    } = options; 10

    if (typeof host !== 'string') { 11
      throw new Error(`Failed to compile search index`); 12
    } 13

    const outputLocation = path.join(outputDirectory, 14
    const data = await fetch(`${host}${WORDPRESS_API}`); 15
    const posts = await data.json(); 16

    const index = posts.map((post = {}) => { 17
      return { 18
        title: post.title.rendered, 19
        slug: post.slug, 20
        "generated": 1598926888737, 21
        "posts": [ 22
          { 23
            "title": "Fry, we have a crate to deliver", 24
            "slug": "fry-we-have-a-crate-to-deliver", 25
            "date": "2020-08-24T03:02:31" 26
          }, 27
          { 28
            "title": "Hey, you add a one and two", 29
            "slug": "hey-you-add-a-one-and-two-zero", 30
            "date": "2020-08-24T03:02:09" 31
          }, 32
          { 33
            "title": "Throw her in the brig", 34
            "slug": "throw-her-in-the-brig", 35
            "date": "2020-08-24T03:01:52" 36
          }, 37
          { 38
            "title": "I love you, buddy!", 39
            "slug": "i-love-you-buddy", 40
            "date": "2020-08-24T03:01:30" 41
          }, 42
          { 43
            "title": "You don't know what you're doing", 44
            "slug": "you-dont-know-what-youre-doing", 45
            "date": "2020-08-24T03:01:15" 46
          } 47
        ] 48
      } 49
    }) 50
  } 51
}
```

# Static WordPress

Next.js WordPress Starter

[Docs](#)

[About](#)

[GitHub](#)



## How to Create a Headless WordPress Blog with Next.js WordPress Starter



By Colby Fayock

April 30th, 2021

Getting Started, Tutorial



Blogs are a great way to get down your thoughts to help others learn, keep track of

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# Static WordPress

Next.js WordPress Starter

[Docs](#)

[About](#)

[GitHub](#)



Blogs are a great way to get down your thoughts to help others learn, keep track of

@colbyfayock

# Static WordPress



Custom Post Type UI

# Demo

---

# Demo

**Review WordPress Instance**

**Set up Next.js WordPress Starter**

**Set up Basic Next.js WP Starter**

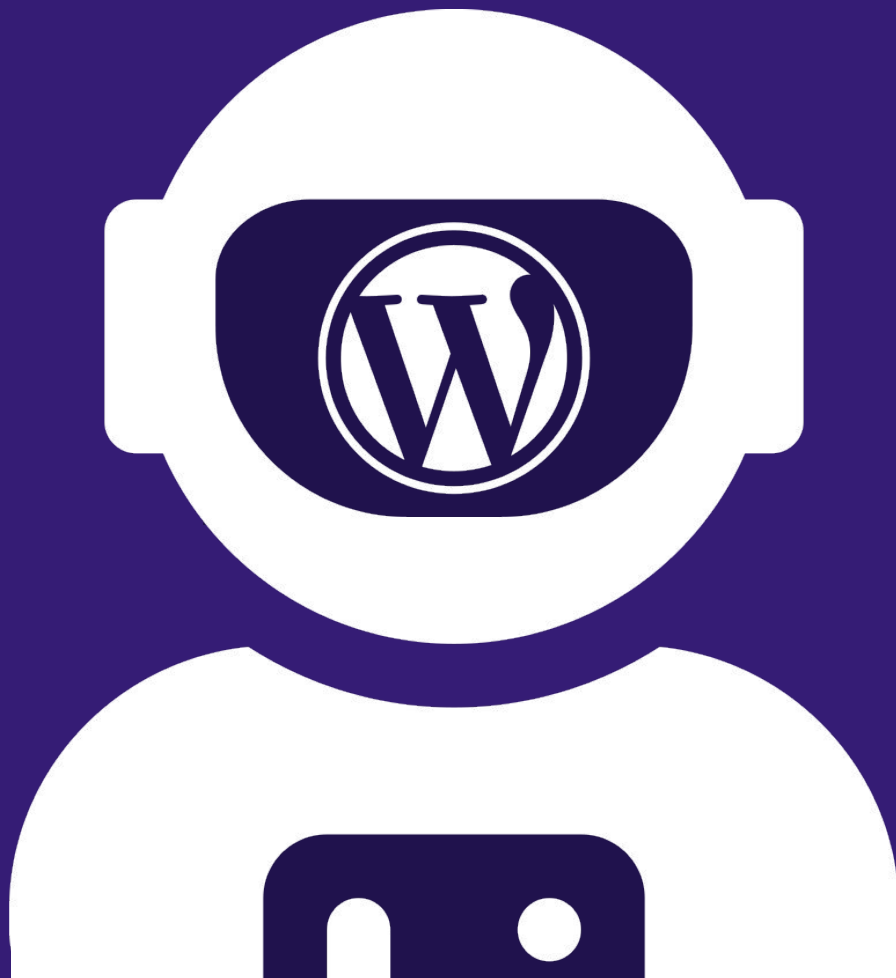
**Dig In to the Code**






# Demo


- ✓ Review WordPress Instance
- ✓ Set up Next.js WordPress Starter
- ✓ Set up Basic Next.js WP Starter
- ✓ Dig In to the Code


















main 3 branches 0 tags Go to file Add file Code Use this template



colbyfayock Merge pull request #188 from GuilleAngulo/readme\_vscode


ed168b0 yesterday


365 commits

 .github/workflows	Improve Github Actions to respect yarn.lock	8 months ago
 docs	Adds the WP/ACF/GraphQL documentation	8 months ago
 plugins	removing wordpress_host as an environment variable option	11 days ago
 public	removing og images	11 days ago
 src	removing canonical link from homepage	2 days ago
 .all-contributorsrc	docs: update .all-contributorsrc [skip ci]	last month
 .eslintignore	Add ESLint support	14 days ago
 .eslintrc.js	Add ESLint support	14 days ago
 .gitignore	Replace sass '/' deprecated operator with math.div	4 days ago
 .prettierrc	Merge branch 'master' into master+social-image	4 months ago
 .prettierrc.js	Add ESLint support	14 days ago
 CODE_OF_CONDUCT.md	Create CODE_OF_CONDUCT.md	8 months ago
 CONTRIBUTING.md	Create CONTRIBUTING.md	8 months ago
 LICENSE	Create LICENSE	8 months ago

About

Bring WordPress to the static world with Next.js

next-wordpress-starter.spacejelly.dev/

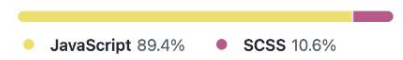
- wordpress nextjs next
- wpgraphql next-starter

- Readme
- MIT License

Contributors 10



Languages



# Colby Fayock

Developer Advocate



@colbyfayock



# Thank You

[colbyfayock.com/click-deploy](https://colbyfayock.com/click-deploy)