

Edge-rendering with Nuxt

Daniel Roe
daniel@roe.dev

@danielcroe

Hello 🖐️

- ◆ Real applications (**agency & SaaS** background)
- ◆ Nuxt **framework** team
- ◆ Maintainer

@nuxtjs/vercel-builder

@nuxtjs/composition-api



@danielcroe

Why Nuxt?

progressive framework

- ◆ zero-effort start
- ◆ best practices built-in
- ◆ full configuration
- ◆ easily extensible

multi-target

- ◆ Node.js server
- ◆ legacy browser
- ◆ modern browser



What's changing in 2021?

- ◆ **serverless** architecture
- ◆ **JAMstack** innovations
- ◆ new **targets** ('worker', Deno)
- ◆ ES modules & TypeScript
- ◆ **data**, not HTML

What hasn't changed

importance of fully rendered HTML

- ◆ great user experience
- ◆ dynamism + speed
- ◆ search engine

```
1 <!DOCTYPE html>
2 <html data-n-head-ssr>
3   <head>
4     <title>Tables | A Business Workflow Management Automation Tool</title>
5     <meta
6       data-n-head="ssr"
7       data-hid="description"
8       name="description"
9       content="Introducing Tables from Area 120 by Google,
10        a new workflow management tool. Explore the ways you
11        can track and automate your business processes today."
12   />
```

Introducing Nitro

the next-generation rendering engine that powers Nuxt 3

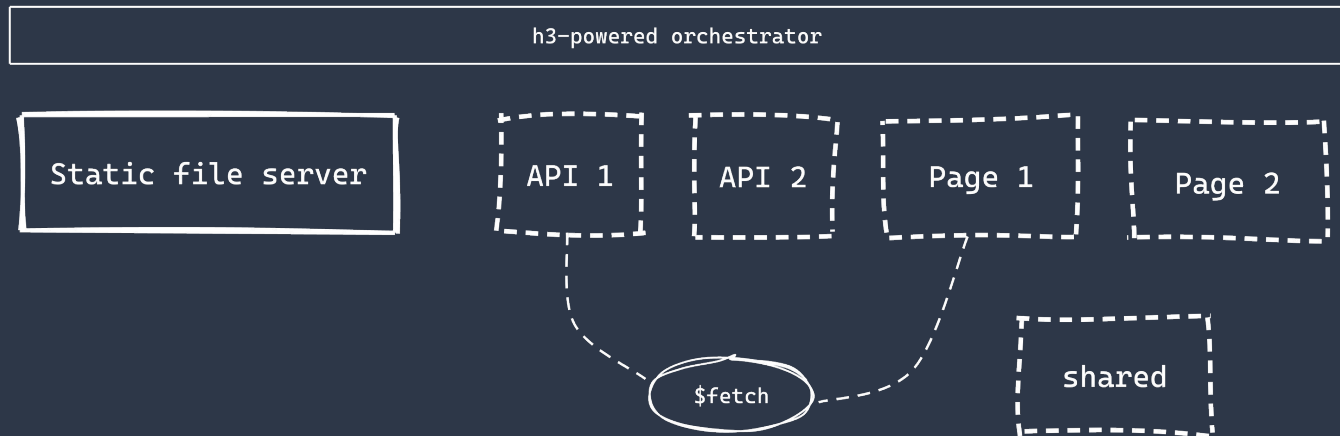


Introducing Nitro



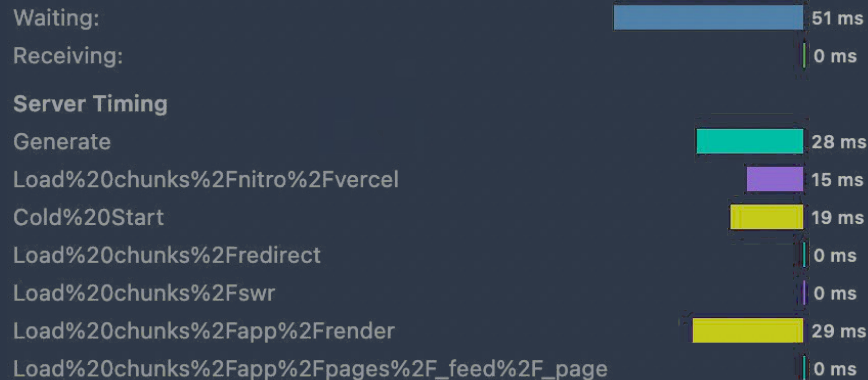
- ◆ 'second-stage' build
- ◆ layered approach
- ◆ cross-platform





🔥 Built for cold-start performance

- ◆ server bundle splitting and async chunk loading
- ◆ API federation
- ◆ isomorphic access to server with **\$fetch**
- ◆ traced dependency tree using **@vercel/nft**
- ◆ expensive operations are **pre-run** (ETag, mime-types)



Built for cold-start performance

- ◆ server bundle splitting and async chunk loading
- ◆ API federation
- ◆ isomorphic access to server with **\$fetch**
- ◆ traced dependency tree using **@vercel/nft**
- ◆ expensive operations are **pre-run** (ETag, mime-types)



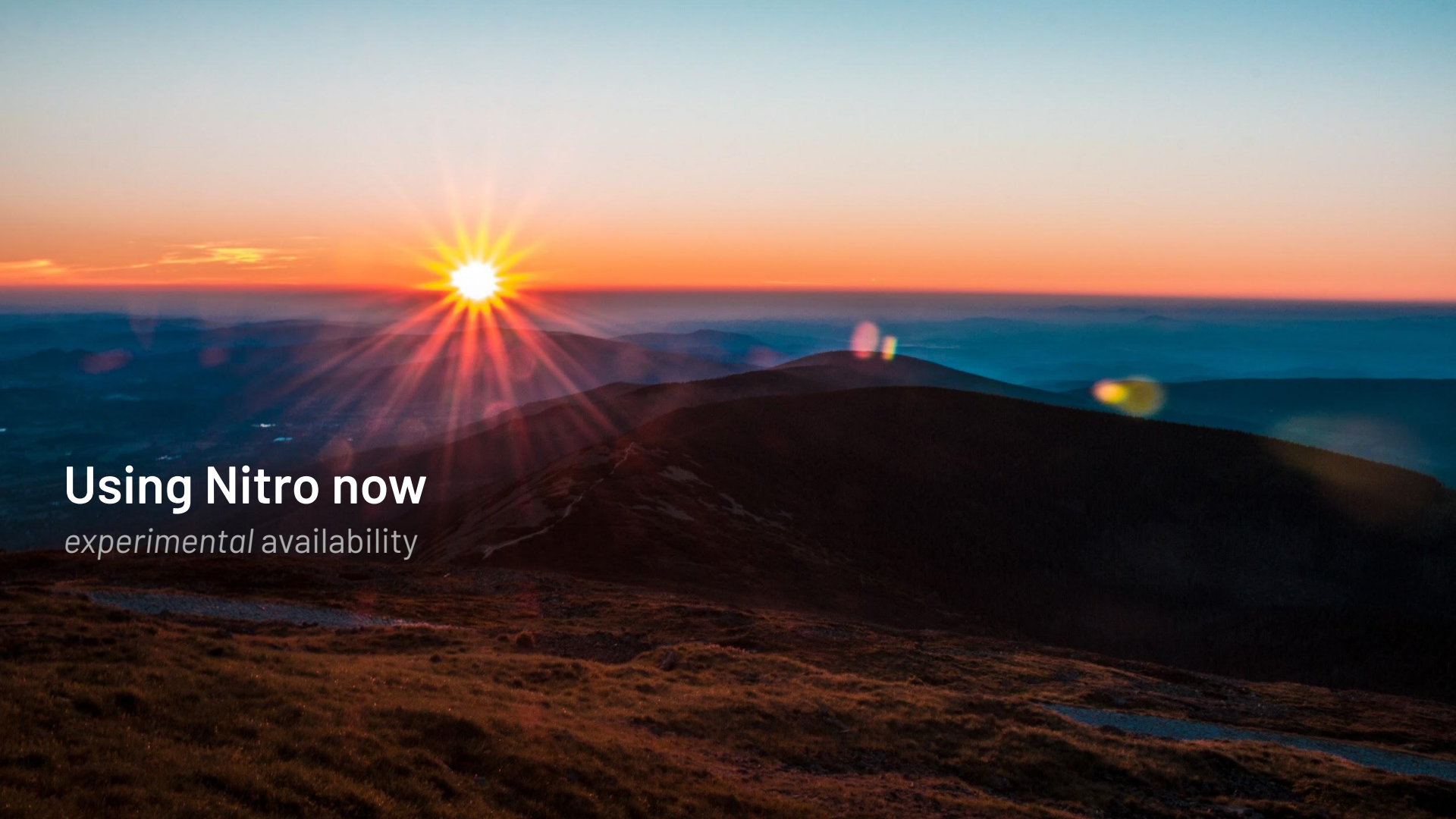
Cross-environment by design

- ◆ **auto-mocking** of Node.js dependencies
- ◆ ultra-lightweight **polyfills** for node built-ins
- ◆ platform **auto-detection**
- ◆ allows us to push rendering to the edge
 - browser service workers - one worker for multiple tabs
 - e.g. Cloudflare Workers - **0ms cold start**

Hybrid + adaptive approach

- ◆ fully **static** pages
- ◆ **payload-only** dynamic API
- ◆ **edge-rendered** pages
- ◆ ... enabling advanced caching

```
1 export default {
2   target: 'static',
3
4   generate: {
5     crawler: false,
6     routes: [
7       '/pre-rendered' // the rest will be dynamic
8     ]
9   }
10 }
11
```

A landscape photograph of a sunset over a mountain range. The sun is a bright white-yellow orb on the horizon, creating a starburst effect with rays of light. The sky transitions from a deep orange near the horizon to a clear, pale blue at the top. The mountains in the foreground and middle ground are dark, silhouetted against the bright sky. The foreground shows a grassy slope with a small stream or path. The overall mood is serene and majestic.

Using Nitro now
experimental availability

Using Nitro with Nuxt 2

experimental availability

- ◆ rapid development (expect breakage)
- ◆ **@nuxt/kit** for module authors (coming soon)



```
1 export default {  
2   buildModules: [  
3     '@nuxt/nitro/compat'  
4   ]  
5 }  
6
```

A scenic landscape photograph of a sunset over a mountain range. The sun is a bright, glowing orb on the horizon, casting a starburst pattern of light rays across the sky. The sky transitions from a deep orange near the horizon to a clear, pale blue at the top. The mountains in the foreground and middle ground are silhouetted against the bright light, with some peaks catching the low-angle light. The foreground shows a grassy slope with a small stream or path winding through it. The overall mood is serene and majestic.

Using Nitro with Nuxt 2

experimental availability

Any questions ... ?