

Vite, the on-demand DX

How Vite becomes great using the mindset of on-demand.

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Core team member of Vite, Vue and Nuxt.


Creator of Vitest, VueUse, UnoCSS, Slidev and unplugin.

Working at NuxtLabs.



 [antfu](#)

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What is
on-demand?



On-demand?

Provide what you need upon the request.

Compare to the transitional "all at once" approach:

PROS

- **Efficient** - only load the parts you need
- **Reponsive & Customizable** - optimize based on request
- **Web is on-demand**

CONS

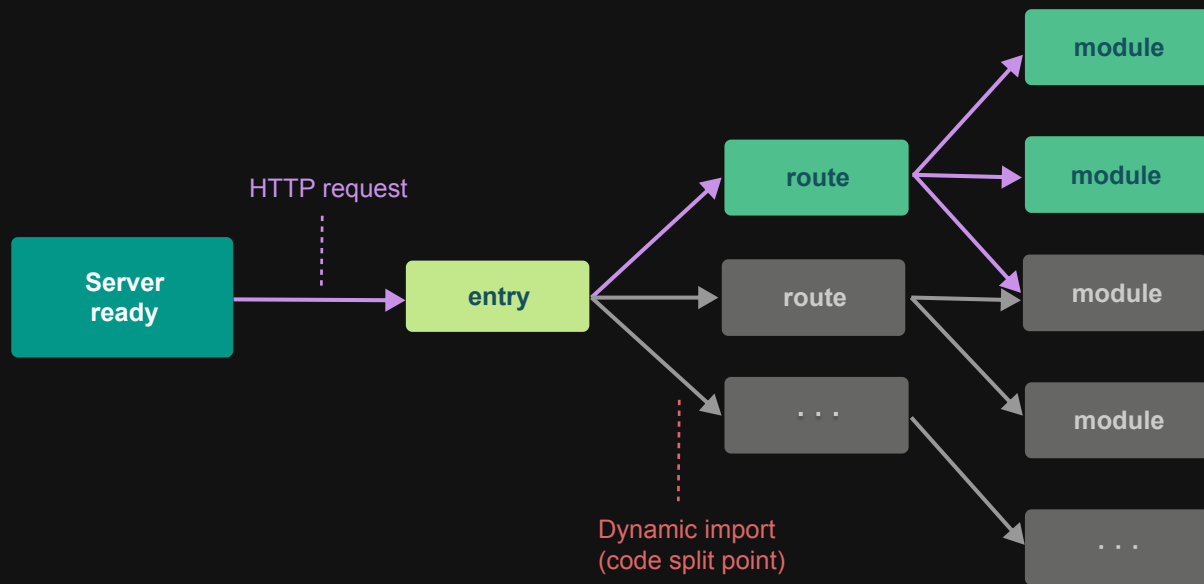
- **Overhead** - network, request waterflow, etc.
- **Complexity** - extra work to implement and maintain

How **trade-offs**

made in Vite?

On-demand on Processing

Vite only transpile the modules you need for the requested page. No bunding.



On-demand on Strategies

DEVELOPEMENT

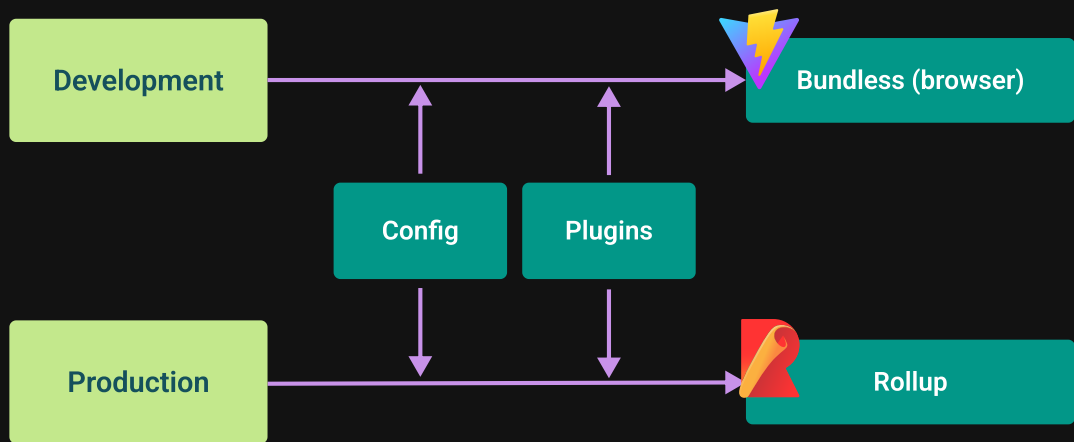
Feedback Loop / DX

- Bundless
- Hot module replacement (HMR)
- Dev server

PRODUCTION BUILD

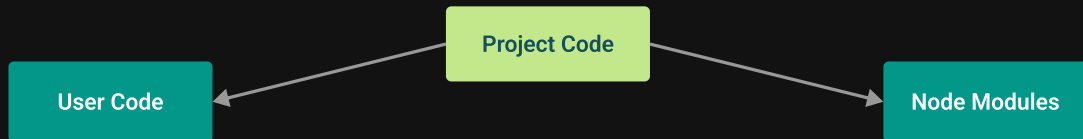
Performance & Size / UX

- Bundle via Rollup
- Tree-shaking
- Code-splitting
- Minification



keep them **consistent**
with *the same config*
and *plugins*

On-demand on Optimization



USER CODE

Changes frequently

- Serve pre-module
- Inject code for Hot Module Replacement

NODE MODULES

Only once a while

- Pre-bundling into a single file
- Skip HMR
- Strong cached with lockfile

Bonus of On-demand - Customizability

Dev server, client-server communication, etc.

```
`vite-plugin-inspect`:
```

Vite Inspect

☐ node_modules
☐ virtual ☐ ssr ☐ exact



./components/SectionTitle.vue

sliddev:context-transform:pre | vue | vue-components | import-analysis

./style.css

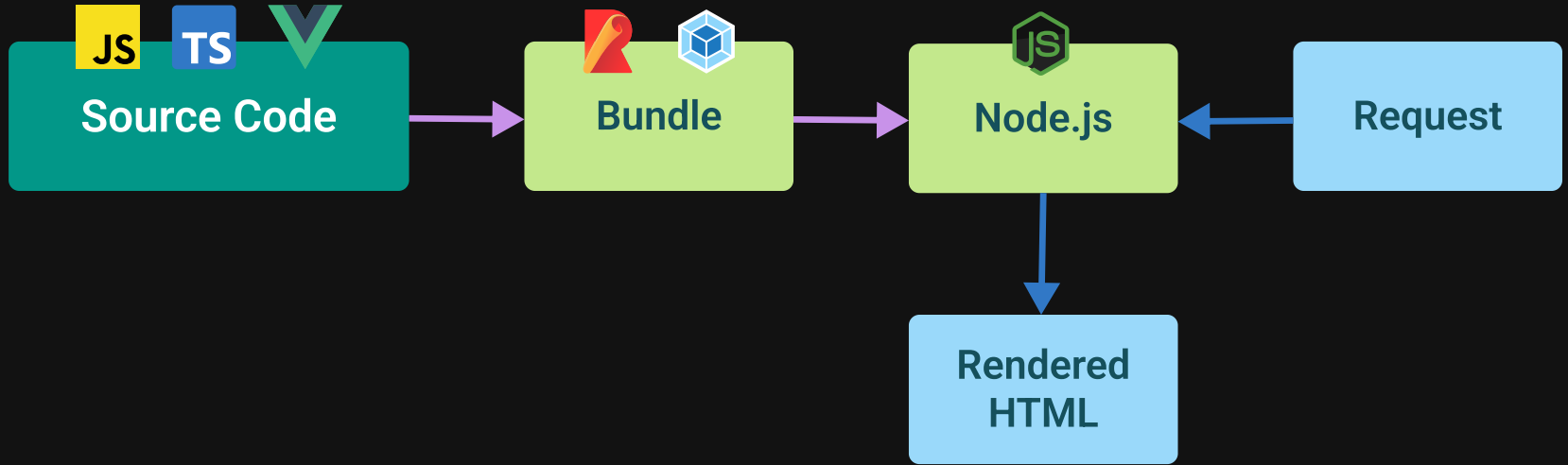
css | css-post | import-analysis

Build **integrations**

with on-demand in mind

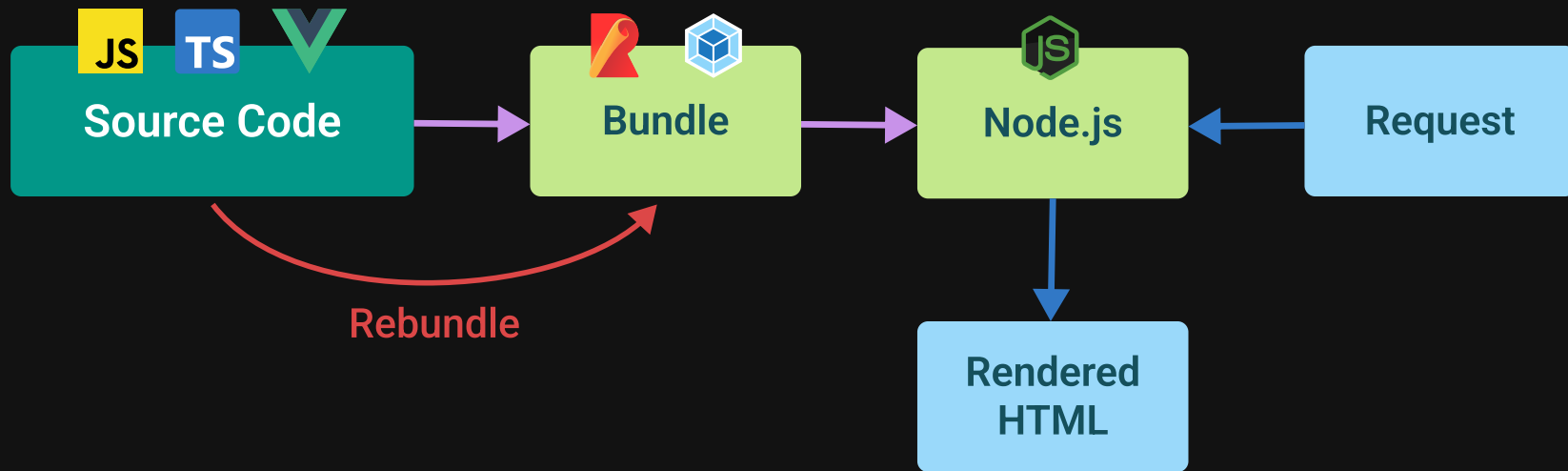
Server Side Rendering

Traditional approach



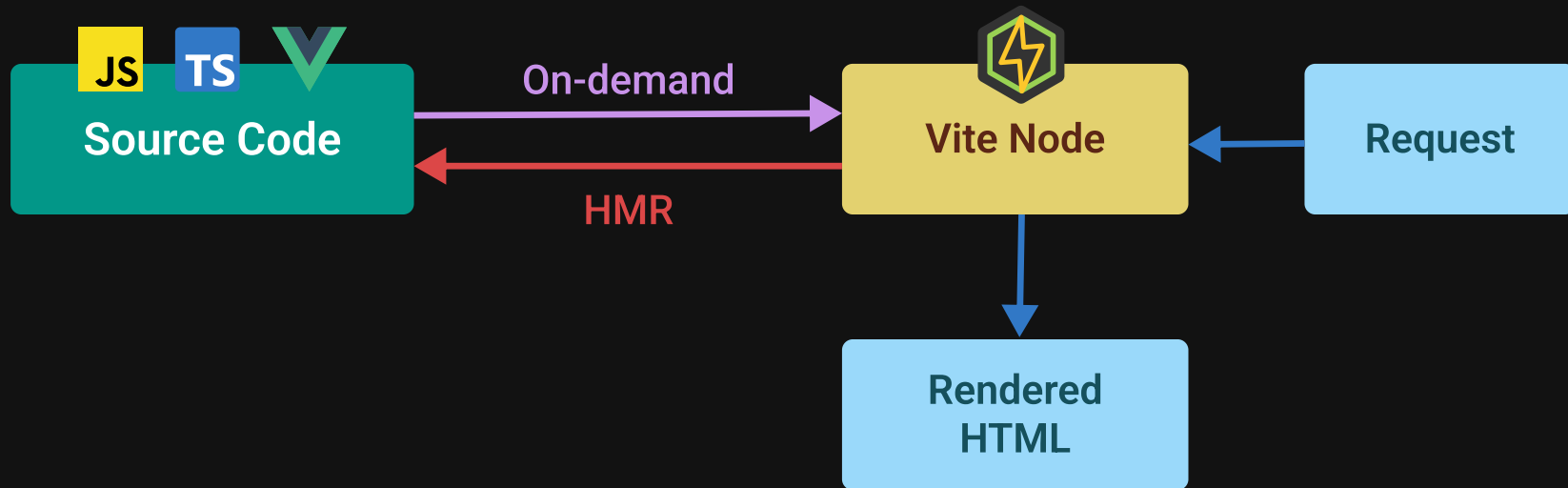
Development time SSR

Rebuild the bundle on source file changes



On-demand SSR in Nuxt 3

We made an on-demand Vite runtime **Vite Node**



Learn more: [Dev SSR on Nuxt with Vite](#)



Vite Node

Vite as Node runtime.

- On-demand evaluation
- Reuses Vite config, plugins, etc.
- Out-of-box ESM & TypeScript support
- Watch mode + HMR
- Separate server/client architecture



...more



Daniel Roe

Open Source / Nuxt

Daniel is a core team member of Nuxt - previously a CTO of a SaaS startup. His open-source work has a focus in the Vue.js and Nuxt ecosystems and he's involved in consultancy with companies around the world, particularly around JAMstack, serverless and software architecture. He's based in the North East of England where he lives with his family, three cats, and a dog.



How Vite Makes Nuxt Possible



Frameworks Panel



Vladimir

Zammad / Vitest

Fullstack Developer, Vitest Core Team member



Vitest, testing DX reimaged

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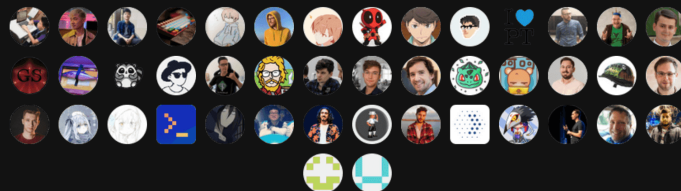


Stanislas

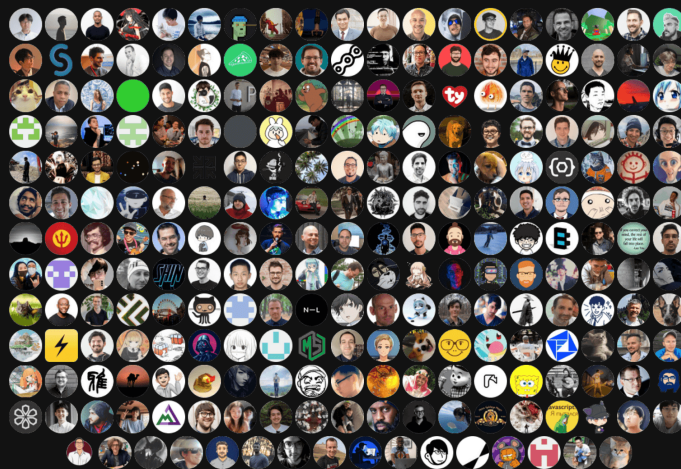


Matt

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Thank You!

Slides can be found on antfu.me