

al

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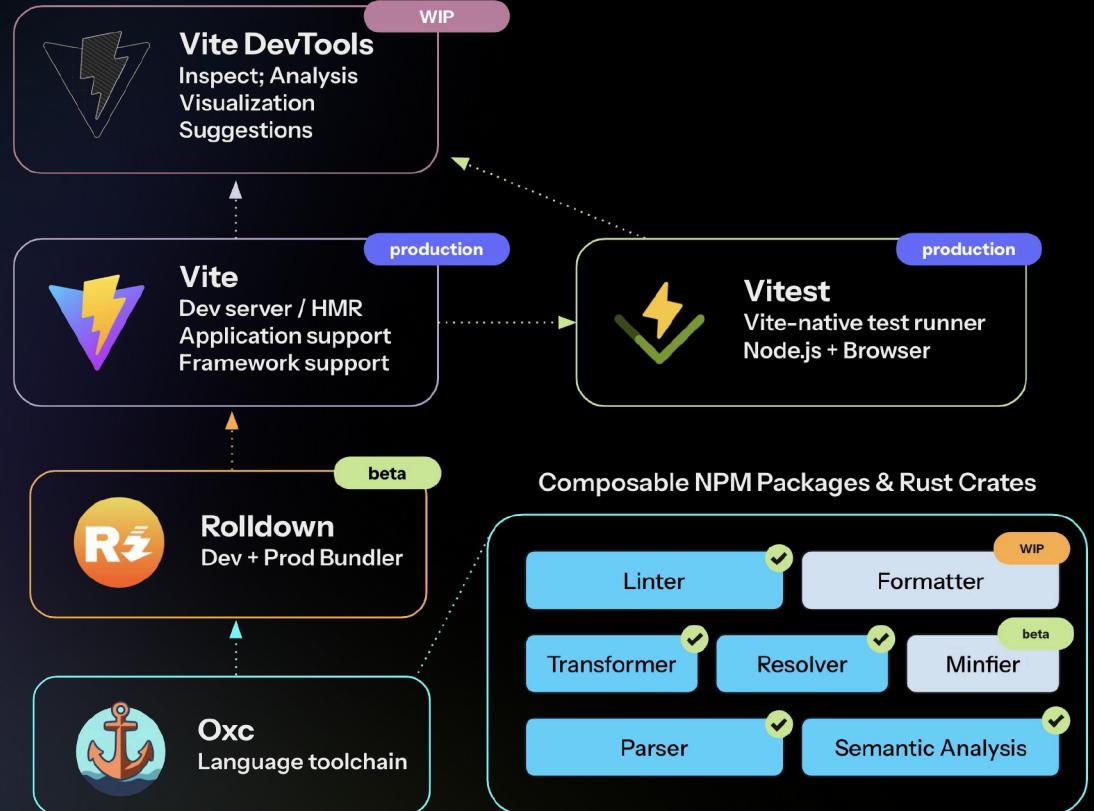
 [antfu7](#)



DEVTOOLS

`void(0)`

Open Source



```
$ vite dev --ui
```

```
$ vite build --ui
```

```
$ vite test --ui
```

```
$ vite lint --ui
```

```
$ vite format --ui
```

```
$ vite lib --ui
```

Why DevTools?

General Developer Tools

"Tools for developers"



Vite itself is also a developer tool!

Special DevTools

"Tools for using tools better"

Chrome DevTools

Nuxt DevTools

Vue DevTools

Vite Plugin Inspect

UnoCSS Inspector

ESLint Config Inspector

Vitest UI

Node Modules Inspector

...

Good Tools Principles

- ❑ Entry Barrier → Easy to get started, simple config, explainable in one sentence
- ❑ Intuitive Design → Meets user expectations and intuition, good user experience
- ❑ Transparency → Transparent to the internal state, easy to debug and optimize
- ❑ Composability → Decoupled modules, easy to combine and extend
- ❑ Extensibility → Flexible plugin system and customizations

Transparency

UnoCSS Inspector beta

Inspector beta

Overview

REPL

Project Root

- src
 - components
 - panel
 - PanelOutputCss.vue
 - PanelCustomCss.vue
 - PanelConfig.vue
 - PanelHtml.vue
 - Playground.vue
 - Editor.vue
 - Preview.vue
 - HeaderBar.vue
 - SelectVersion.vue
 - SelectLayers.vue
 - App.vue
 - index.html
 - __play.html
 - __play.html?html-proxy&index=0.js
- Disk Root
 - Users/antfu/i/unocss/packages-inte...
 - TitleBar.vue
 - CodeMirror.vue

Presets

- @unocss/preset-icons
- @unocss/preset-uno
- @unocss/preset-web-fonts
- @unocss/preset-attributify

Rules

245 dynamic
849 static

Variants

62

Shortcuts

6

Version

66.1.2

Included Files

16

CSS Size

4.98 kB gzipped

Matched Rules

234

Layers

icons
shortcuts
default

Merge Alias

TOP 10 UTILITIES

```
w-full60 w-454 inline-flex53 top-035 py-134 justify-center32 ?30 overflow-auto19 transition-transform16 text-sm16
```

COLOR PALETTE 13

gray ¹⁵ #9ca3af	gray-400 ⁴ #9ca3af	\$cm ⁴ var(--cm...)	light-900 ² #dde1e3	dark-900 ² #0f0f0f	gray-600 ² #4b5563	white ² fff	yellow-400 ² #facc15	red-400 ² #f87171	green ² #4ade80	light-700 ¹ #e9ecf
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dark-800 ¹ #181818	yellow-4 ¹ #facc15
----------------------------------	----------------------------------

⚡ Vite Plugin Inspect

File	Build Type	Size Change	Time
./devtools-kit/src/runtime/iframe-client.ts	esbuild import-analysis	1.42KB → 1.16KB	15ms
./devtools-ui-kit/src/assets/styles.css	css css-post nuxt:dev-style-ssr import-analysis	1.37KB → 5.66KB	401ms
./devtools-ui-kit/src/components/NBadge.vue	vue vue-tracer import-analysis	71B → 1.94KB	1ms
./devtools-ui-kit/src/components/NBadgeHashed.vue	vue vue-tracer import-analysis	517B → 3.61KB	176ms
./devtools-ui-kit/src/components/NButton.ts	esbuild nuxt:components:imports import-analysis	1.48KB → 1.65KB	213ms
./devtools-ui-kit/src/components/NCard.vue	vue vue-tracer import-analysis	80B → 1.95KB	-
./devtools-ui-kit/src/components/NCheckbox.vue	vue vue-tracer nuxt:components-loader import-analysis	1.05KB → 4.64KB	10ms
./devtools-ui-kit/src/components/NCodeBlock.vue	vue vue-tracer import-analysis	1.79KB → 5.51KB	146ms
./devtools-ui-kit/src/components/NDarkToggle.vue	vue vue-tracer nuxt:components-loader import-analysis	1.71KB → 4.99KB	38ms
./devtools-ui-kit/src/components/NDialog.vue	vue vue-tracer nuxt:components-loader import-analysis	1.70KB → 5.71KB	174ms

Vitest UI

Vitest

Search... Filter

Fail Pass
 Skip Only Tests

FAIL (0) / RUNNING (0)
PASS (119) / SKIP (--)

> ✓ packages/eslint-plugin/rules/array-bracket-spacing.test.ts 1027ms
> ✓ packages/eslint-plugin/rules/array-bracket-spacing.test.ts 605ms
> ✓ packages/eslint-plugin/rules/array-element-spacing.test.ts 774ms
> ✓ packages/eslint-plugin/rules/arrow-parameter-spacing.test.ts 546ms
> ✓ packages/eslint-plugin/rules/arrow-spacing.test.ts 154ms
> ✓ packages/eslint-plugin/rules/block-spacing.test.ts 419ms
> ✓ packages/eslint-plugin/rules/brace-style.test.ts 623ms
> ✓ packages/eslint-plugin/rules/brace-style.test.ts 281ms
> ✓ packages/eslint-plugin/rules/comma-dangle.test.ts 1644ms
> ✓ packages/eslint-plugin/rules/comma-dangle.test.ts 299ms
> ✓ packages/eslint-plugin/rules/comma-spacing.test.ts 597ms
> ✓ packages/eslint-plugin/rules/comma-spaces.test.ts 214ms
> ✓ packages/eslint-plugin/rules/comma-style.test.ts 816ms
> ✓ packages/eslint-plugin/rules/computed-property-spacing.test.ts 664ms
> ✓ packages/eslint-plugin/rules/curly-newline.test.ts 798ms
> ✓ packages/eslint-plugin/rules/dot-location.test.ts 308ms

✓ packages/eslint-plugin/rules/array-bracket-spacing/array-bracket-spacing.test.ts

Report Module Graph Code Console (0)

Hide node_modules Inline Modules

general.ts → ast.ts → array-bracket-spacing.ts → merge.ts → runner.ts
create-rule.ts → array-bracket-spacing.ts
index.ts → array-bracket-spacing.ts
parsers-flow.ts → array-bracket-spacing.ts

```
graph TD; general[general.ts] --> ast[ast.ts]; ast --> arrayBrackets[array-bracket-spacing.ts]; arrayBrackets --> merge[merge.ts]; merge --> runner[runner.ts]; createRule[create-rule.ts] --> arrayBrackets; index[index.ts] --> arrayBrackets; parsersFlow[parsers-flow.ts] --> arrayBrackets;
```

Nuxt DevTools

DevTools

Search...

All Using Not used All Composables Directives

./composables/rpc.ts

clientFunctions extendedRpcMap rpc wsConnecting wsConnectingDebounced wsError

./composables/state-commands.ts

CommandItem getNuxtDocsCommands registerCommands useCommands

./composables/constants.ts

ComposablesDocs DETAILS_MAX_ITEMS ServerRouteTabIcons

./composables/dev-auth.ts

devAuthToken ensureDevAuthToken isDevAuthed requestForAuth updateDevAuthToken userAgentInfo

../../../../devtools-ui-kit/src/composables/notification.ts

devtoolsUiProvideNotificationFn devtoolsUiShowNotification x15 DevtoolsUiShowNotificationPosition

./composables/utils.ts

formatDuration getComponent

getSocialPreviewCard isBui

pluralizeByCount refreshDa

./composables/state-tabs.ts

getCategorizedTabs useAllRe

./composables/client.ts

getColorMode showConnectionWarning useClient useClientHead useClientRoute useClientRouter useInjectionClient

../../../../devtools-ui-kit/src/composables/color.ts

getHslColorFromStringHash

Copy </> Source

It has been referenced 15 times by:

- ./composables/dev-auth.ts
- ./composables/editor.ts
- ./components/AssetDropZone.vue
- ./components/AssetDetails.vue
- ./pages/modules/timeline.vue

meFromPath getRequestMethodClass

Name jsonStringifyCircular parseReadablePath

eNuxtCompatibilityVersion useSessionState

ESLint Config Inspector

ESLint Config Inspector v1.1.0

Composed with **68** config items, updated yesterday

Configs Rules Files ⚡ ⚡ | ⚠ Using 1 deprecated rules

This tab shows the preview for files match from the workspace. This feature is **experimental** and may not be 100% accurate.

#1 Config antfu/yaml/rules ⌚ 2 ⚡ 1

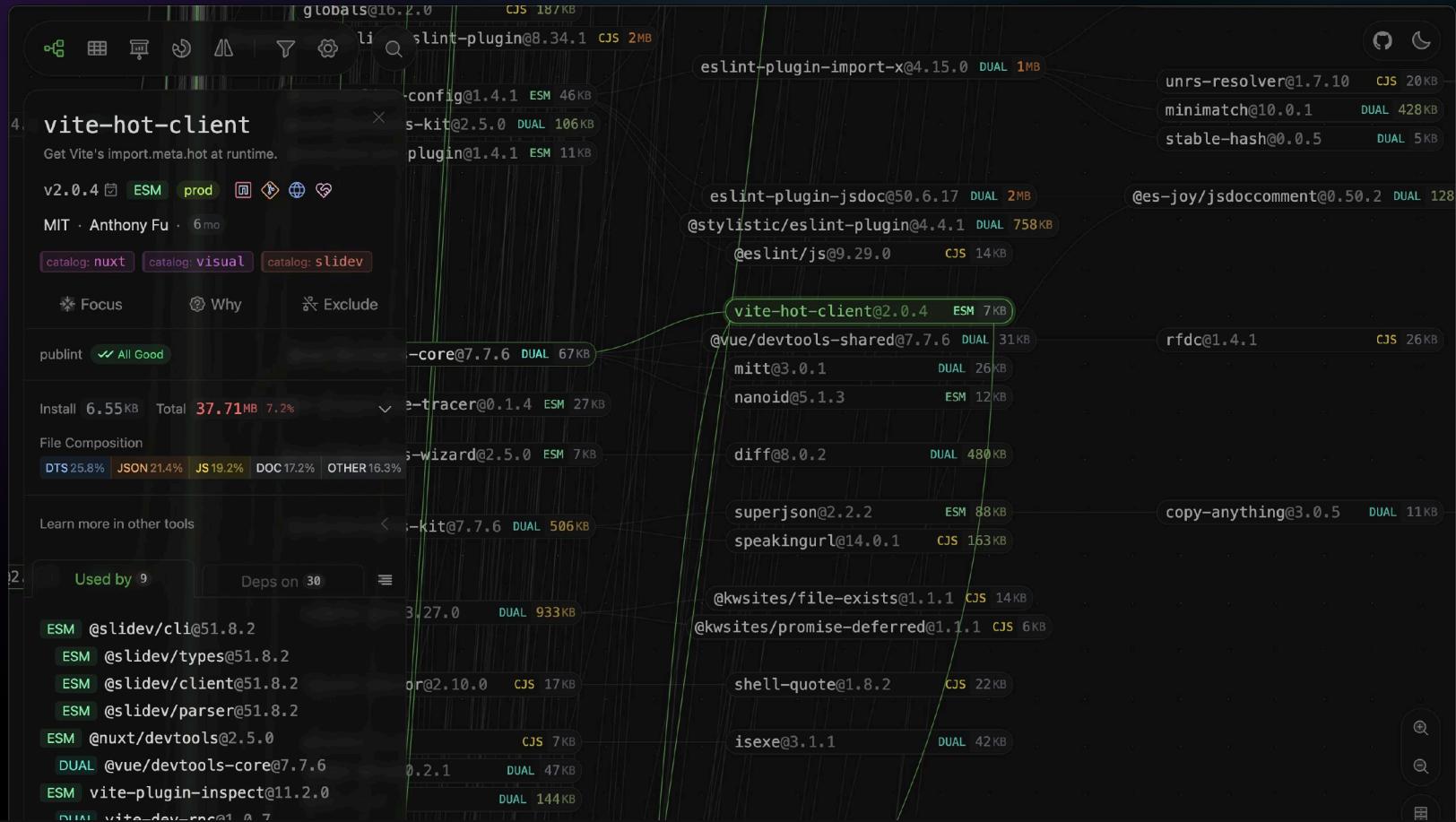
- Configs Specific to the Files (1)
 - antfu/yaml/rules
- Matched Globals
 - **/*.{y?(a)ml}
- Matched Local Files (2)
 - .github/workflows/ci.yml
 - .github/workflows/release.yml

#2 Config antfu/jsonc/rules ⌚ 1 ⚡ 1

- Configs Specific to the Files (1)
 - antfu/jsonc/rules

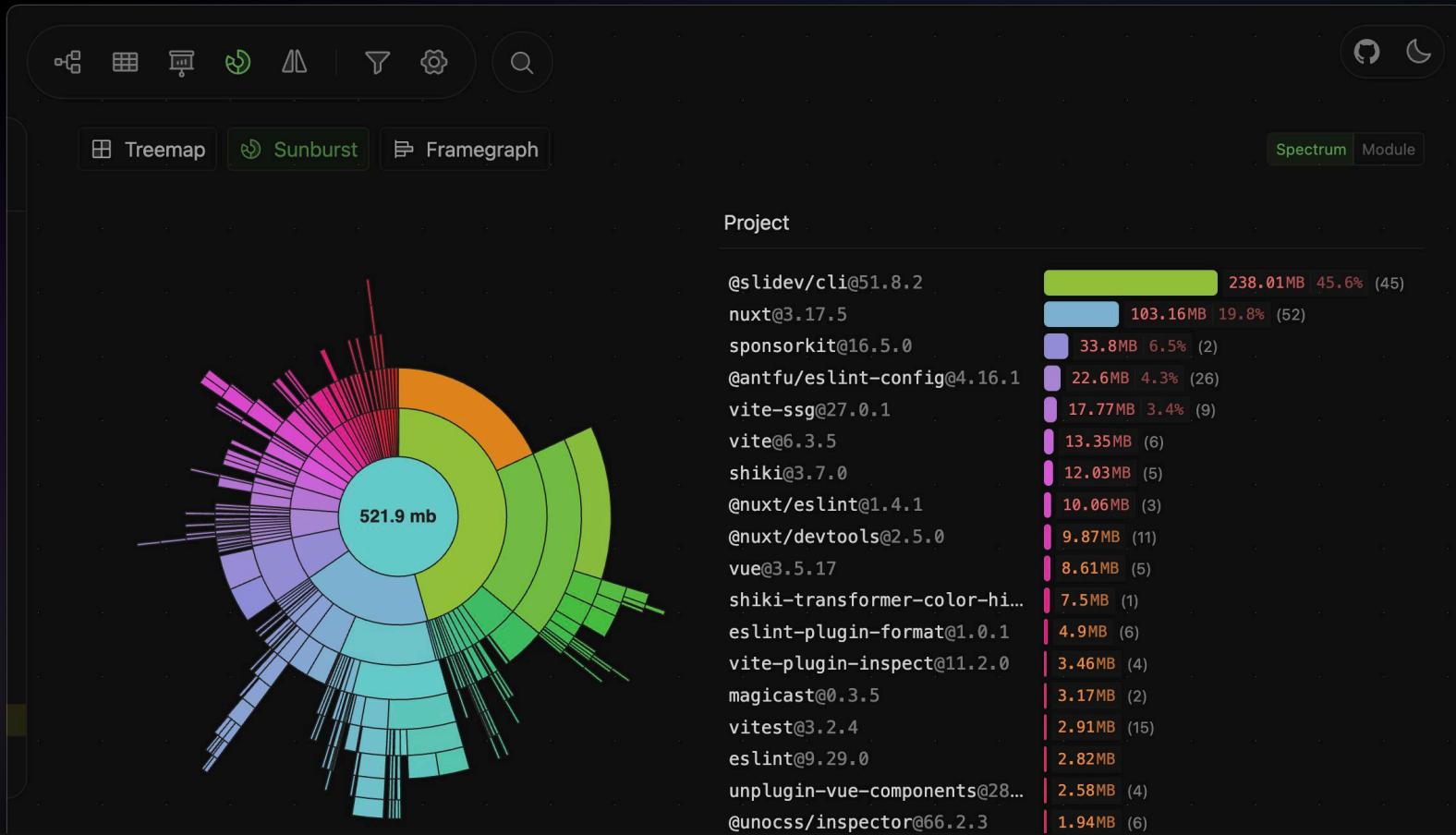


Node Modules Inspector





Node Modules Inspector





DEVTOOLS

A screenshot of the Vite DevTools interface. At the top left is a "Re-select Session" button. Below it is a sidebar with icons for Home, History, Plugins, Chunks, Assets, and a Refresh button. The main area has three sections: "Meta Info", "Build Entries", and "Views".

Meta Info

# Build ID	sid_0_1752078309530
⌚ Created At	7/10/2025, 12:25:09 AM
📁 Directory	/Users/antfu/i/vite-devtools/packages/devtools
📦 Total Modules	405
⚙️ Plugins	64
💻 Platform	browser
📄 Format	esm

Build Entries

- entry `.../node_modules/.../nuxt/dist/app/entry.js`

Views

- Modules Graph
- Plugins
- Chunks
- Assets

Build Overview

Current focusing on build mode
by consuming Rolldown's output

The screenshot shows the Vite Devtools interface with the 'Bundle' tab selected. At the top, there's a search bar and several filtering checkboxes: Node Modules, TypeScript (checked), CSS (checked), Vue (checked), File (checked), Virtual (checked), and Package (checked). Below the filters are buttons for 'View as' (List, Graph, Folder) and a refresh icon. The main area displays a list of files, each with a small icon indicating its type (e.g., .ts, .css, .vue, .js). The files listed are:

- ./devtools-rpc/src/client.ts
- ./devtools-rpc/src/index.ts
- ./devtools-rpc/src/presets/index.ts
- ./devtools-rpc/src/presets/ws/client.ts
- ./devtools-rpc/src/server.ts
- ./__uno.css
- ./src/app/app.vue
- ./src/app/app.vue?vue&type=script&setup=true&lang.ts
- ./src/app/components/chart/ModuleFlamegraph.vue
- ./src/app/components/chart/ModuleFlamegraph.vue?vue&type=script&setup=true&lang.ts
- ./src/app/components/code/DiffEditor.vue
- ./src/app/components/code/DiffEditor.vue?vue&type=script&setup=true&lang.ts
- ./src/app/components/code/DiffEditor.vue?vue&type=style&index=0&lang.postcss
- ./src/app/components/data/ChunkDetails.vue
- ./src/app/components/data/ChunkDetails.vue?vue&type=script&setup=true&lang.ts
- ./src/app/components/data/ModuleDetailsLoader.vue
- ./src/app/components/data/ModuleDetailsLoader.vue?vue&type=script&setup=true&lang.ts
- ./src/app/components/data/ModuleImportRelationships.vue
- ./src/app/components/data/ModuleImportRelationships.vue?vue&type=script&setup=true&lang.ts
- ./src/app/components/data/RawEventsTable.vue
- ./src/app/components/data/RawEventsTable.vue?vue&type=script&setup=true&lang.ts
- ./src/app/components/display/Badge.vue

On the left side of the interface, there's a vertical sidebar with icons for Home, Project, Assets, Diff, and Help.

Bundle File List

Display all files participating in the bundle, providing filtering and search functionality.

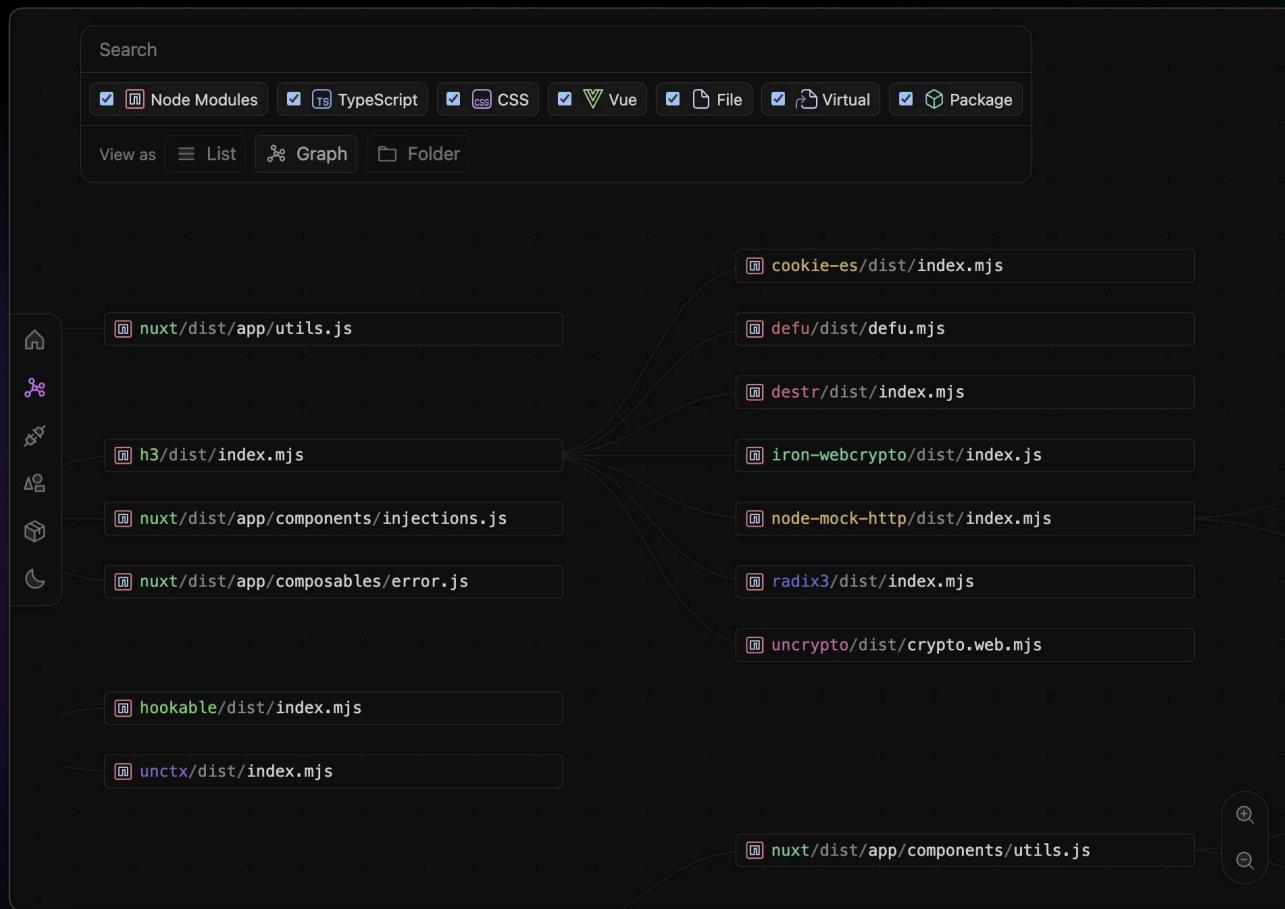
The screenshot shows the Vite Devtools file tree interface. At the top, there is a search bar and several filter checkboxes: Node Modules, TypeScript, CSS, Vue, File, Virtual, and Package. Below the filters are buttons for 'View as' (List, Graph, Folder), which are currently set to 'Folder'. The main area displays a hierarchical file tree:

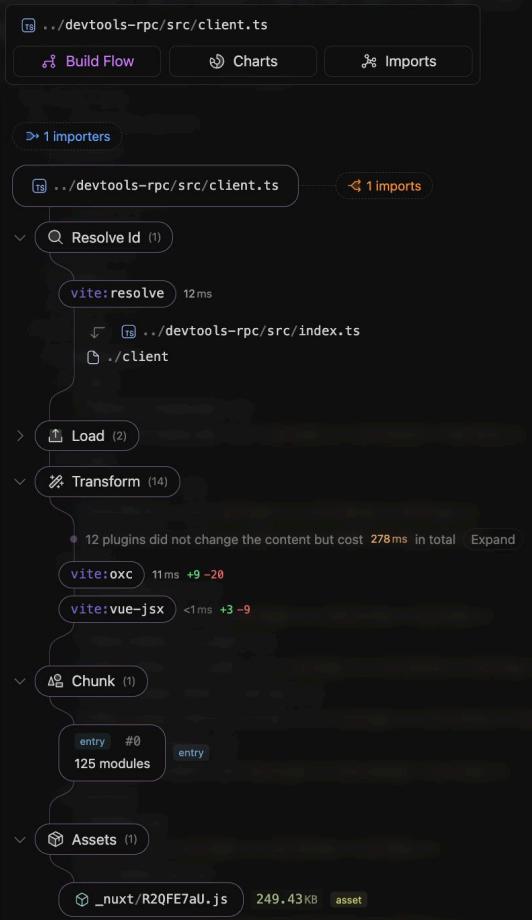
- Project Root
 - ../devtools-rpc/src
 - presets
 - ws
 - client.ts
 - index.ts
 - client.ts
 - index.ts
 - server.ts
 - src/app
 - _uno.css
 - Node Modules
 - Virtual Modules
 - virtual:nuxt:/Users/antfu/i/vite-devtools/packages/devtools/src/.nuxt
 - app-component.mjs
 - app.config.mjs
 - components.plugin.mjs
 - css.mjs

File Tree

Bundled files in tree view

Module Relationship Graph





Module Transformation Flow

Parse → Resolve → Transform → Chunk → Bundle → Output

Track the entire process, find bottlenecks and optimizations

Code Transformation Comparison

The screenshot displays a developer's interface for analyzing code transformations, likely from Vite's DevTools.

Build Flow: Shows the flow of dependencies. A file at `./devtools-rpc/src/client.ts` has 1 importer, which is another `client.ts` file. This file has 1 import from `./index.ts`, which in turn has 12ms spent on `vite:resolve` and loads `./client`.

Transforms: A detailed log of 14 transforms applied to the code:

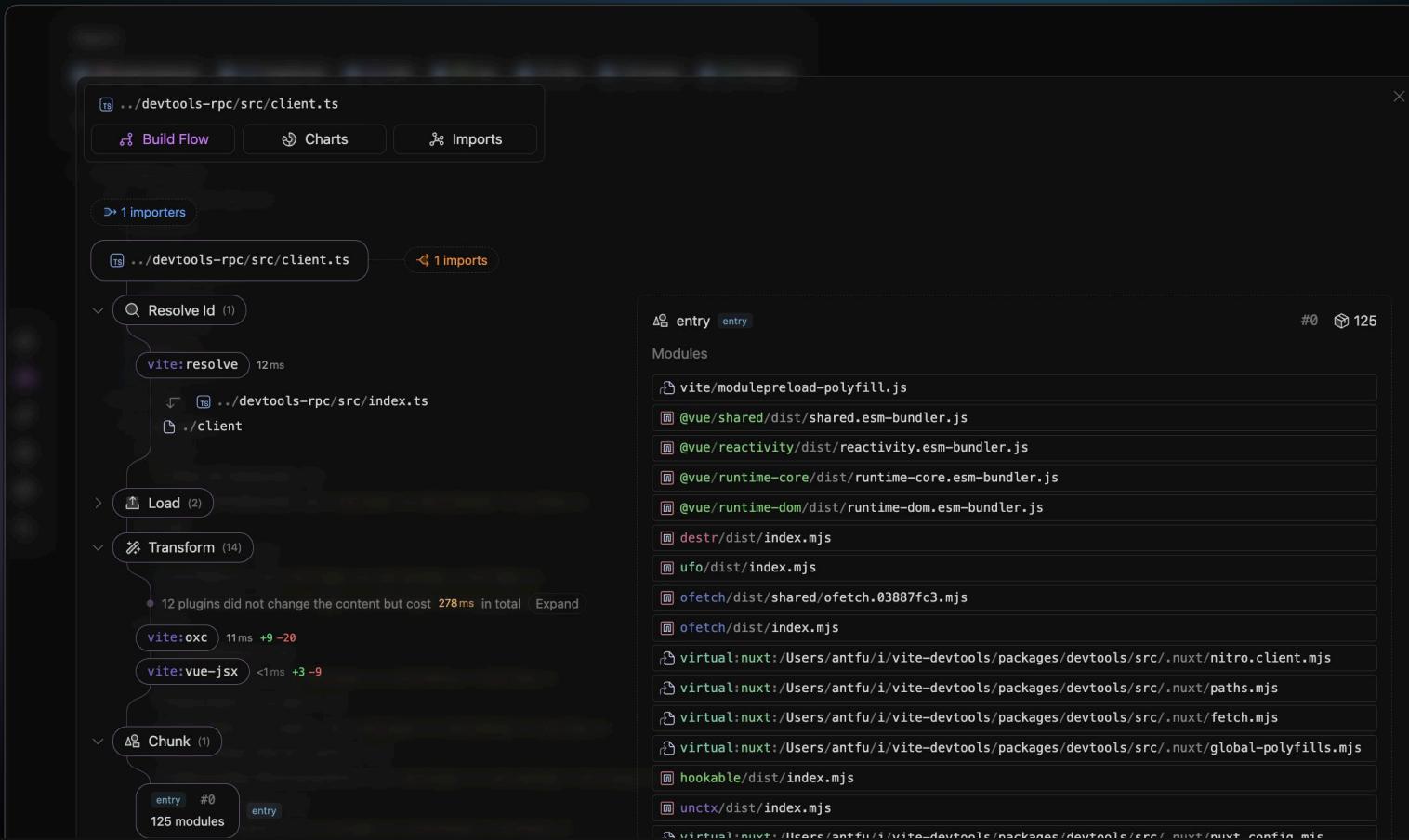
- vite:oxc Transform:** 11ms, +9 -20. Details: 12 plugins did not change the content but cost 278ms in total.
- vite:vue-jsx Transform:** <1ms, +3 -9.

Code Snippets: Two snippets of transformed code are shown side-by-side, highlighting differences in syntax and logic.

```
1 import type { BirpcOptions } from 'birpc'
2 import { createBirpc } from 'birpc'
3
4 export function createRpcClient<ServerFunctions = Record<string, never>, ClientFunctions extends object = Record<string, never>>(
5   preset: Partial<BirpcOptions>,
6   options: {
7     timeout: number;
8     ...preset;
9     ...rpcOptions;
10    ...ClientFunctions;
11  }
12 ) {
13   const { preset, rpcOptions = {} } = options;
14   return createBirpc<ServerFunctions, ClientFunctions>(
15     ...preset,
16     ...options,
17     ...timeout,
18     ...rpcOptions,
19   );
20 }
```

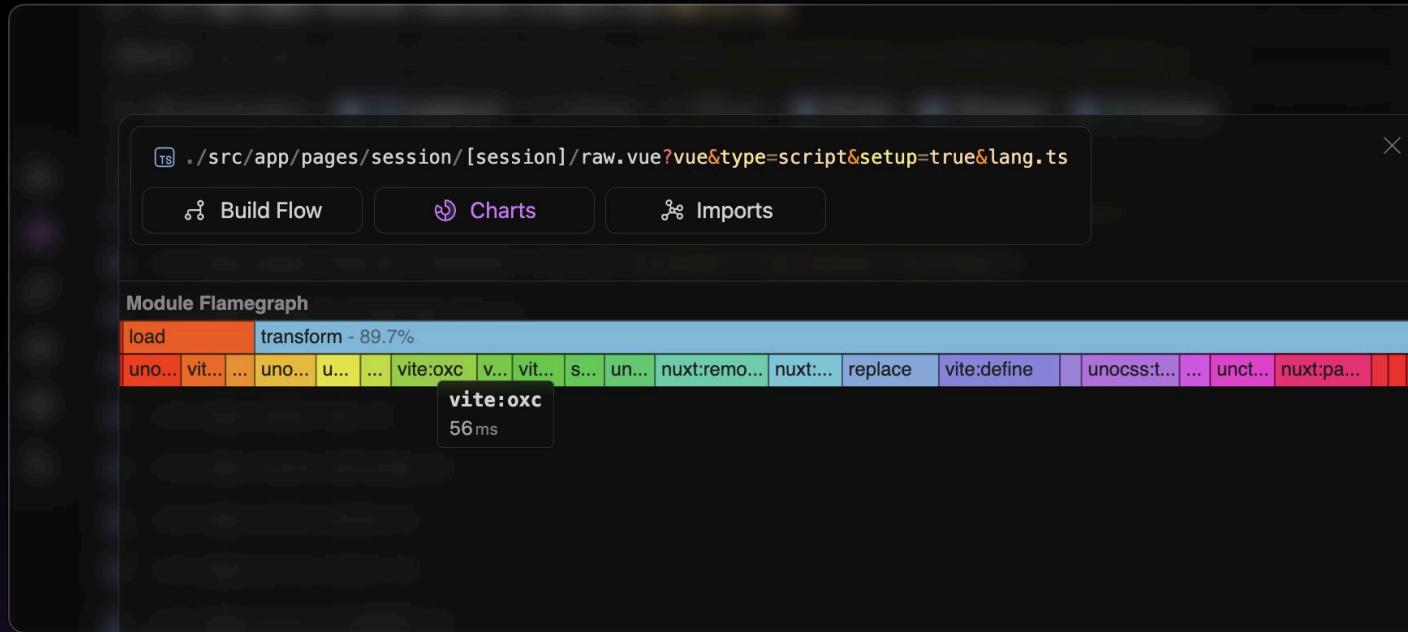
```
1 import { createBirpc } from "birpc";
2 export function createRpcClient(options, options) {
3   const { preset, rpcOptions = {} } = options;
4   return createBirpc(functions, {
5     ...preset,
6     ...timeout: -1,
7     ...rpcOptions
8   });
9 }
10
```

Chunk Information



WIP

Performance Consumption Chart



Search

Rollup Vite Unocss Nuxt

Builtin

User Plugins



#0 builtin:oxc-runtime

#1 vite:watch-package-data

#2 builtin:alias

#3 unocss:transformers:pre

#4 unocss:global:build:scan

#5 unocss:global:content

#6 nuxt:components-loader-pre

#7 nuxt:layer-aliasing

#8 nuxt:server-devonly:transform

#9 impound

#10 nuxt:import-protection

#11 builtin:module-preload-polyfill

#12 vite:resolve-builtin:get-environment

#13 rolldown:vite-resolve

#14 vite:html-inline-proxy

#15 vite:css

#16 builtin:transform

#17 builtin:json

Plugins

List of all the plugins in their order of execution

Plugin Hooks

unocss:global:build:scan

⌚ 3.0 min ⏱ 15.5 s ⚡ 16.4 s | ⏳ 3.6 min | ⌂ 720 | ⌂ 2,001

Build Flow Charts

Hook name	Module	Duration
Resolve Id	node_modules/~/.nuxt/dist/app/entry.js	1ms
Resolve Id	vite/modulepreload-polyfill	3ms
Resolve Id	vue	2ms
Resolve Id	./nuxt.js	2ms
Resolve Id	./composables/error.js	2ms
Transform	virtual:nuxt:/Users/antfu/i/vite-devtools/packages/vite/src/node_modules/.cache/nuxt...	43ms
Load	node_modules/~/.vue/dist/vue.runtime.esm-bundler.js	97ms
Load	virtual:nuxt:/Users/antfu/i/vite-devtools/packages/vite/src/node_modules/.cache/nuxt...	11ms
Resolve Id	h3	11ms
Resolve Id	vue	4ms
Resolve Id	./nuxt.js	24ms
Resolve Id	./router.js	23ms
Resolve Id	node_modules/~/.nuxt/dist/app/plugins/revive-payload.client.js	57ms
Resolve Id	node_modules/~/.nuxt/dist/head/runtime/plugins/unhead.js	53ms
Resolve Id	node_modules/~/.nuxt/dist/pages/runtime/plugins/router.js	33ms
Resolve Id	node_modules/~/.nuxt/dist/app/plugins/payload.client.js	27ms
Resolve Id	node_modules/~/.nuxt/dist/app/components/nuxt-root.vue	1ms
Resolve Id	node_modules/~/.nuxt/dist/app/plugins/navigation-repaint.client.js	31ms

View as

List

Graph

Δ^o entry entry

#0 ↗ 0 ⚡ 101

► Modules (101)

Δ^o [error_404_2] entry

#1 ↗ 2 ⚡ 2

▼ Modules (2)

▀ nuxt/dist/app/components/error-404.vue?vue&type=style&index=0&scoped=a8693205&lang.css

▀ nuxt/dist/app/components/error-404.vue

▼ Imports (2)

▀ entry entry statement

#0 ↗ 0 ⚡ 101

▀ [nuxt_link] common statement

#13 ↗ 1 ⚡ 1

Δ^o [error_500_2] entry

#2 ↗ 1 ⚡ 2

▼ Modules (2)

▀ nuxt/dist/app/components/error-500.vue?vue&type=style&index=0&scoped=289a8b59&lang.css

▀ nuxt/dist/app/components/error-500.vue

▼ Imports (1)

▀ entry entry statement

#0 ↗ 0 ⚡ 101

Δ^o [display_comparison_metric_6] entry

#3 ↗ 4 ⚡ 6

▼ Modules (6)

▀ ./src/app/components/display/ComparisonMetric.vue?vue&type=script&setup=true&lang.ts

▀ ./src/app/components/display/ComparisonMetric.vue

Chunking

Relationship between chunks and files

Bundled Packages

with Duplicated Packages Detection

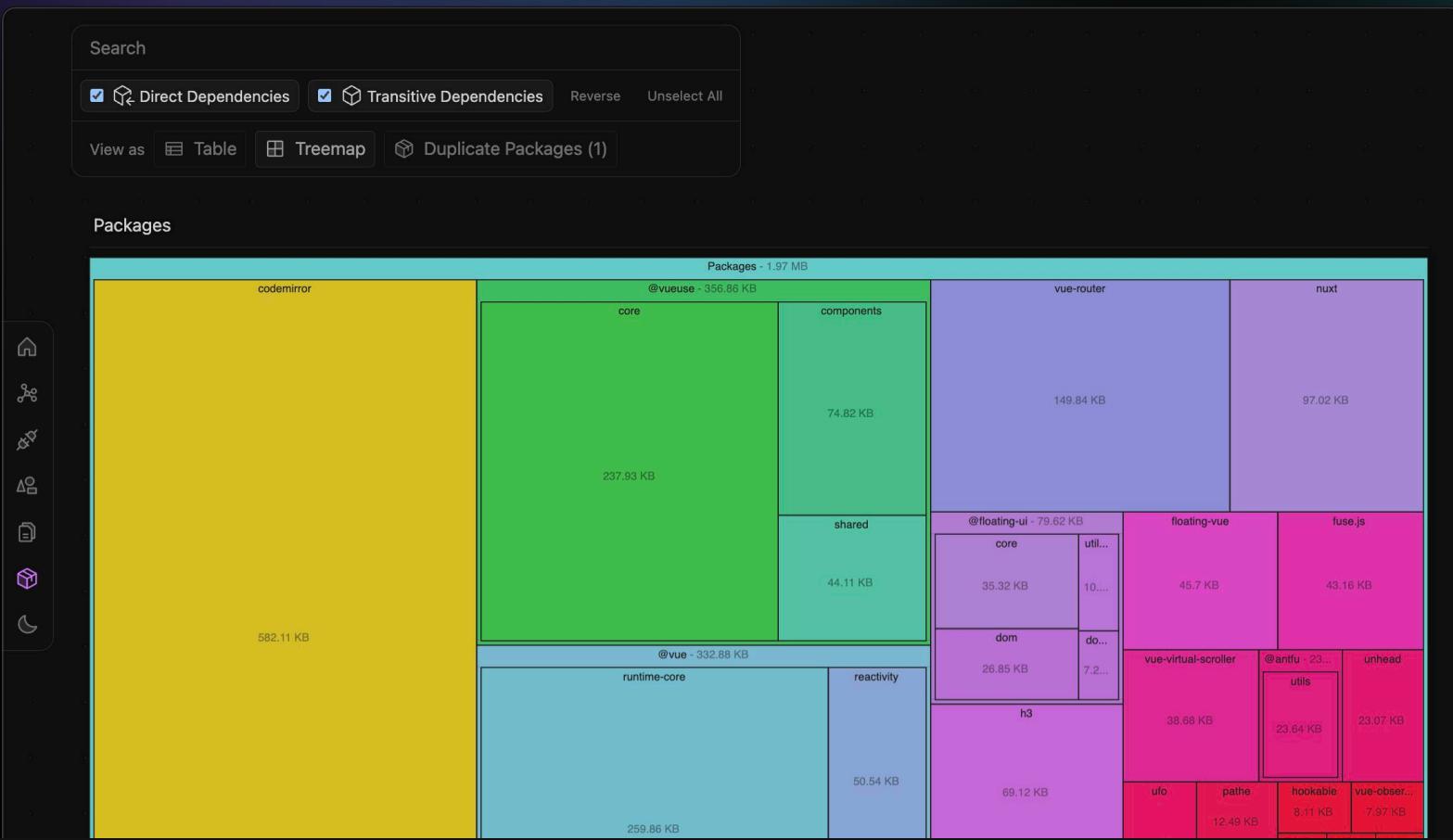
Search

Direct Dependencies Transitive Dependencies Reverse Unselect All

View as Table Treemap Duplicate Packages (1)

Package	Version	Size ↓	Importers
@antfu/utils	9.2.1	23.64KB	./src/app/pages/session/[session]/plugins.vue?vue&type=script +1
@floating-ui/core	1.7.3	35.32KB	.../node_modules/~@floating-ui/dom/dist/floating-ui.dom.mjs +1
@floating-ui/dom	1.1.1	7.27KB	.../node_modules/~floating-vue/dist/floating-vue.mjs +1
@floating-ui/dom	1.7.4	26.85KB	./src/app/components/display/GraphHoverView.vue?vue&type=script +1
@floating-ui/utils	0.2.10	10.18KB	.../node_modules/~@floating-ui/core/dist/floating-ui.core.mjs +1
@unhead/vue	2.0.14	3.35KB	.../node_modules/~@unhead/vue/dist/client.mjs +9
@vue/reactivity	3.5.22	50.54KB	.../node_modules/~@vue/runtime-core/dist/runtime-core.esm.js +1
@vue/runtime-core	3.5.22	259.86KB	.../node_modules/~@vue/runtime-dom/dist/runtime-dom.esm.js +1
@vue/shared	3.5.22	22.48KB	.../node_modules/~@vue/runtime-dom/dist/runtime-dom.esm.js +1
@vueuse/components	13.9.0	74.82KB	./src/app/components/flowmap/ModuleFlow.vue?vue&type=script +1
@vueuse/core	13.9.0	237.93KB	./src/app/composables/dark.ts +24
@vueuse/shared	13.9.0	44.11KB	.../node_modules/~@vueuse/core/index.mjs +2
birpc	2.6.1	6.38KB	.../rpc/src/server.ts +2
codemirror	5.65.20	582.11KB	./src/app/composables/codemirror.ts +59

Packages Size Graph



Vite DevTools is
NOT ONLY about Visualizations

Being Agnostic

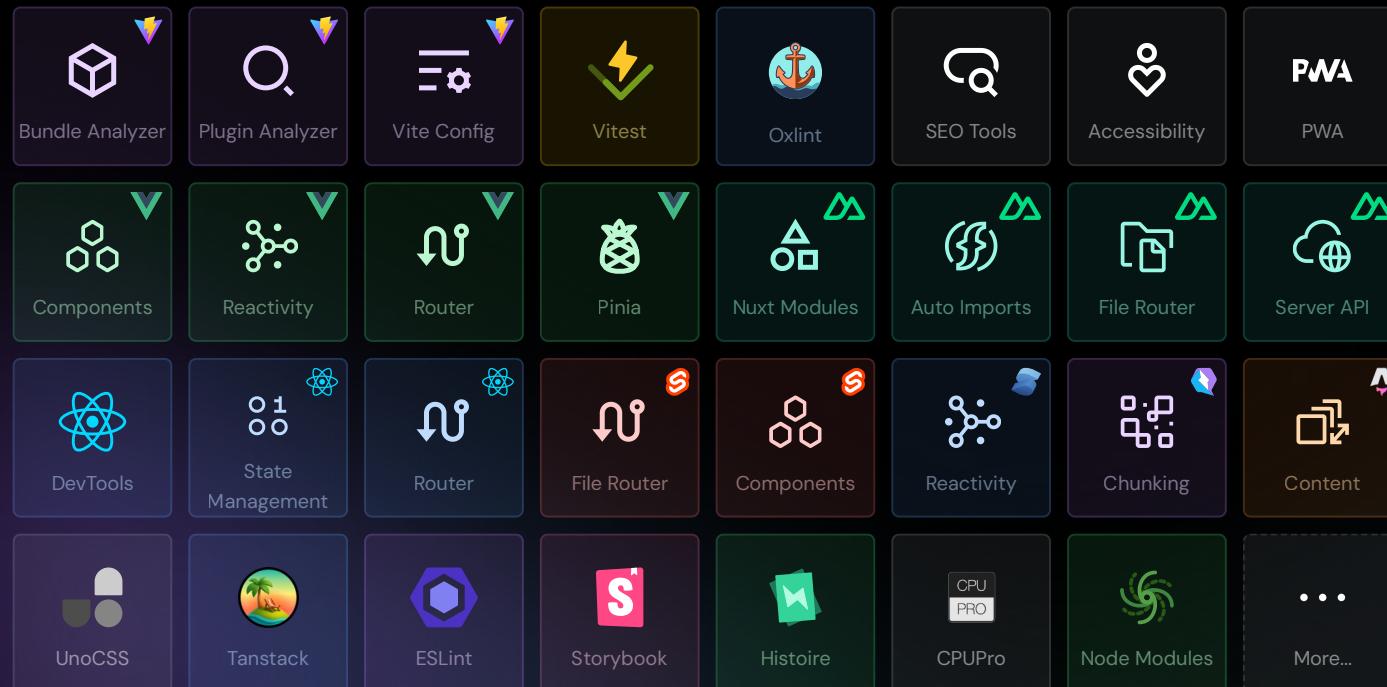
- Far from Users' Interests (Too Low-level)
- "Common Divisor" Among All the Frameworks
- Have to also be "Extensible"



Extensibility

😎 Your DevTools?

Modular, Composable, Collaborative



DevToolsKit



DEVTOOLS

Vite DevTools Plugin

- A Superset of Vite Plugin
- Via the Additional `devtools` Hook
- Built-in RPC Layer
- Built-in Isomorphic Views Hosting
 - Embedded Floating Panel
 - Browser Extension
 - Standalone Webpage
 - Deployable SPA

```
import type { Plugin } from 'vite'

export default function MyPlugin(): Plugin {
  return {
    name: 'my-plugin',
    transform: [ /* ... */ ],
    devtools: {
      /* pesudo-code for demo */
      async setup({ rpc, views, docks }) {
        rpc.register({
          name: 'my-plugin:hello',
          async handler(message) {
            console.log(`Hello from client, ${message}`)
          }
        })
      }

      views.staticHost('./dist/client', './my-plugin')

      docks.register({
        id: 'my-plugin',
        title: 'My Plugin',
        icon: './my-plugin/favicon.svg',
        // type can also be 'webcomponent', 'action' etc.
        type: 'iframe',
        url: './my-plugin',
      })
    }
  }
}
```

Goals & Vision



Visualization

Display Vite/Rollup internal state and process



Analysis & Suggestions

Provide suggestions and optimization solutions for build and plugins



Build Comparison

Compare and track build results across commits



Build Snapshots

Record build process, shareable and analyzable reproduction



Vite Plus

Integrate Vitest UI, Oxlint visualization, etc.



DevTools Kit

Unified DevTools architecture, allowing upper frameworks to provide extensions



Progress



Module Analysis

Display each plugin's load and transform results for each file



Bundle Visualization

Display dependency relationships of each file and bundle composition



Bundle Analysis

Display build size, optimization suggestions, etc.



DevTools Kit

Extensible DevTools architecture



Development Mode

Waiting for Full bundle mode



Integrations

Collaborate with frameworks to unified the DevTools experience

Thanks to



Arlo
@webfansplz



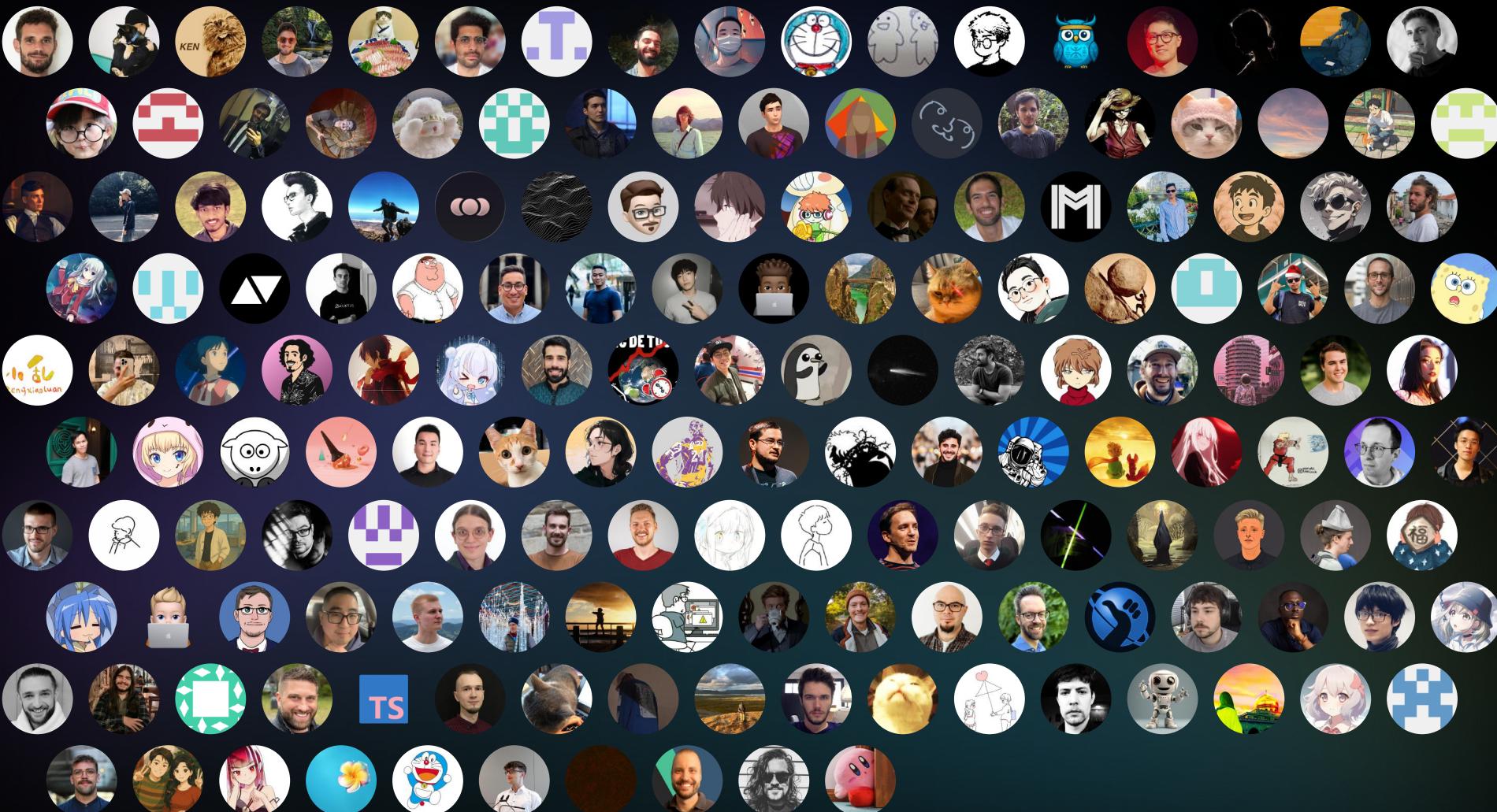
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vitejs/devtools

Thank You

Slides available at antfu.me