

*a*

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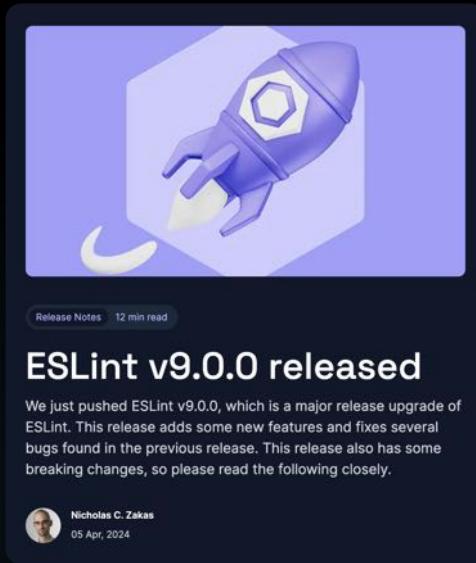
# ESLint

## One for All

*Made Easy*

# ESLint v9.0.0

released 67 days ago



The image shows a dark-themed card for the ESLint v9.0.0 release. At the top is a purple hexagonal icon with a white hexagonal pattern inside. Below it is the title "ESLint v9.0.0 released". A small "Release Notes" button indicates a 12-minute read time. The main text describes the release as a major upgrade with new features, bug fixes, and breaking changes. It includes a photo of Nicholas C. Zakas and the date "05 Apr, 2024".

Release Notes 12 min read

## ESLint v9.0.0 released

We just pushed ESLint v9.0.0, which is a major release upgrade of ESLint. This release adds some new features and fixes several bugs found in the previous release. This release also has some breaking changes, so please read the following closely.

 Nicholas C. Zakas  
05 Apr, 2024



Heard about the new ESLint Flat Config?



Using **Flat Config** already?

# Legacy Config

eslintrc config

- Multiple sources `.eslintrc`, `.eslintrc.js`,  
`.eslintrc.json`, `package.json`, etc.
- Convention based `extends`
- Package name based `plugins`
- Inheritance tree can be complex

```
// .eslintrc.json
{
  "extends": [
    "eslint:recommended",
    "plugin:@typescript-eslint/recommended"
  ],
  "plugins": [
    "vue",
    "n"
  ],
  "rules": {
    "vue/html-indent": ["error", 2]
  },
  "overrides": [
    // ...
  ]
}
```

# Flat Config

- Single source `eslint.config.js` & `.cjs` `.mjs`
- Explicit native imports
- Plugins are objects capability to rename plugins
- Composable, easier to trace back

```
// eslint.config.js
import eslint from '@eslint/js'
import typescript from '@eslint-typescript/eslint-plugin'
import vue from 'eslint-plugin-vue'
import n from 'eslint-plugin-n'

export default [ // export an array of configs
  eslint.configs.recommended,
  ...typescript.configs.recommended,
  {
    plugins: {
      vue,
      node: n, // do a rename here
    },
    rules: {
      'vue/html-indent': ['error', 2]
    }
  }
]
```

# Flat Config



- RFC was created at January 2019
- Experimental in **v8.21.0**
- Stable in **v8.45.0**
- Default in **v9.0.0**
- JavaScript config with full control
- Simplified inheritance and overriding
- Flexible, Dynamic, Customizable

# Migration @eslint/migrate-config

CLI tool to convert legacy config to flat config

```
npx @eslint/migrate-config .eslintrc.json
```

```
// .eslintrc.json
{
  "env": {
    "node": true,
    "es6": true
  },
  "parserOptions": {
    "ecmaVersion": 2020,
    "sourceType": "module"
  },
  "extends": [
    "eslint:recommended",
    "plugin:ava/recommended",
    "prettier"
  ],
  "plugins": ["prettier", "import"],
  "rules": {
    "prettier/prettier": 2,
    "ava/no-ignored-test-files": 0,
    "ava/no-import-test-files": 0,
    "no-console": 2
  }
}
```



```
// eslint.config.mjs
import prettier from 'eslint-plugin-prettier'
import _import from 'eslint-plugin-import'
import { FlatCompat } from '@eslint/eslintrc'

const compat = new FlatCompat()
export default [
  ...compat.extends(
    'eslint:recommended',
    'plugin:ava/recommended',
    'prettier'
  ),
  {
    plugins: {
      prettier,
      import: _import,
    },
    languageOptions: {
      ecmaVersion: 2020,
      sourceType: 'module',
    }
  }
]
```

# Toolings

New tools and possibilities with Flat Config

# Config Inspector

Official

```
eslint --inspect-config
```

- Visualize your config
- Understand the composition
- In-place documentations
- File path tester

```
// eslint.config.js
import antfu from '@antfu/eslint-config'

export default antfu({
  vue: true,
  typescript: true,
  stylistic: {
    indent: 2,
    semi: true,
  },
})
```

## ESLint Config Inspector v0.4.10

/Users/antfu/i/talks/2024-06-13/src/eslint.demo.config.ts  
Composed with 37 config items, updated 5 minutes ago

Configs

Rules

Files

☰

⚠ Using 1 deprecated rules

🔍 Test matching with filepath...

Expand All Collapse All

> anonymous #1	29	29	29	29
> antfu/javascript/setup	2	2	2	2
> antfu/javascript/rules	108	108	108	108
> antfu/javascript/disables/cli	1	1	1	1
> antfu/eslint-comments/rules	4	4	4	4
> antfu/node/rules	8	8	8	8
> antfu/jsdoc/rules	17	17	17	17
> antfu/imports/rules	11	11	11	11
> antfu/imports/disables/bin	2	2	2	2
> antfu/unicorn/rules	13	13	13	13
> antfu/command/rules	1	1	1	1
> antfu/perfectionist/setup	1	1	1	1
> antfu/dev/setup	4	4	4	4

# Flat Config Utils

Community

antfu/eslint-flat-config-utils

```
import eslint from '@eslint/js'
import typescript from 'typescript-eslint'
import unocss from '@unocss/eslint-plugin'
import vue from 'eslint-plugin-vue'

export default [
  eslint.configs.recommended,
  ...typescript.configs.recommend,
  ...await unocss(),
  {
    files: ['*.vue'],
    ...vue.configs['vue3-recommand'],
    rules: {
      ...vue.configs['vue3-recommand'].rules,
      'vue/html-indent': ['error', 2]
    }
  }
]

// (pesudo code for demo)
```



```
import { compose } from 'eslint-flat-config-utils'
import eslint from '@eslint/js'
import typescript from 'typescript-eslint'
import unocss from '@unocss/eslint-plugin'
import vue from 'eslint-plugin-vue'

export default compose(
  eslint.configs.recommended,
  typescript.configs.recommend, // auto spread
  unocss() // auto await in parallel
)
  .append( // chainable extensions
    vue.configs['vue3-recommand']
  )
  // override any configs with their name or index
  .override('vue', {
    files: ['*.vue'],
    rules: {
      'vue/html-indent': ['error', 2]
    }
  })
```

# ESLint Typegen

Community

antfu/eslint-typegen

```
/**  
 * @type {import('eslint').Linter.FlatConfig[]}  
 */  
  
const configs = [  
  {  
    rules: []  
    'eslint-comments/disable-enable-pair': 'off',  
    'import'      You, 12 seconds ago • Uncommitted changes  
  },  
  {  
    ':':  
      'import/consistent-type-specifier-style?  
      'import/default?  
      'import/dynamic-import-chunkname?  
      'import/export?  
      'import(exports-last?  
      'import/extensions?  
      'import/first?  
      'import/group-exports?  
      'import/max-dependencies?  
      'import/named?  
      'import/namespace?  
      'import/newline-after-import?  
  }  
]
```

(property) RuleOptions['import/consistent-type-specifier-style']?: Linter.RuleEntry<ImportConsistentTypeSpecifierStyle> | undefined

Enforce or ban the use of inline type-only markers for named imports.

@see — <https://github.com/un-ts/eslint-plugin-import-x/blob/v0.4.4/docs/rules/consistent-type-specifier-style.md>

# One for All

One config for all projects

## Legacy Config

```
{  
  "extends": [  
    "@antfu/eslint-config",  
    "@antfu/eslint-config-ts",  
    "@antfu/eslint-config-vue",  
    "@antfu/eslint-config-vue-ts"  
    // ...provide every combination?  
  ],  
  "rules": {  
    // ...a lot overrides  
    "indent": ["error", 4],  
    "@typescript-eslint/indent": ["error", 4],  
    "jsx-indent": ["error", 4],  
    "vue/indent": ["error", 4]  
  }  
}
```

## Flat Config

```
import antfu from '@antfu/eslint-config'  
  
export default antfu({  
  vue: true,  
  typescript: true,  
  stylistic: {  
    indent: 4  
  }  
  // ...  
})
```

- ✓ Shared configs can take user options.
- ✓ One single config, adapts to all projects.
- ✓ Minimal configures as Prettier.
- ✓ Powerful and customizable as ESLint.

# Project-aware Configs

Example:  Nuxt ESLint



[eslint.nuxt.com](https://eslint.nuxt.com)

```
// Generated by Nuxt based on your project
import withNuxt from './.nuxt/eslint.config.mjs'

export default withNuxt(
  // your custom config goes here
)
```

# ESLint is More than a Linter

Mature and powerful AST Toolkit

# ESLint can be a... Formatter



# ESLint Stylistic

Collection of stylistic ESLint rules.  
Formatting and linting in one go.

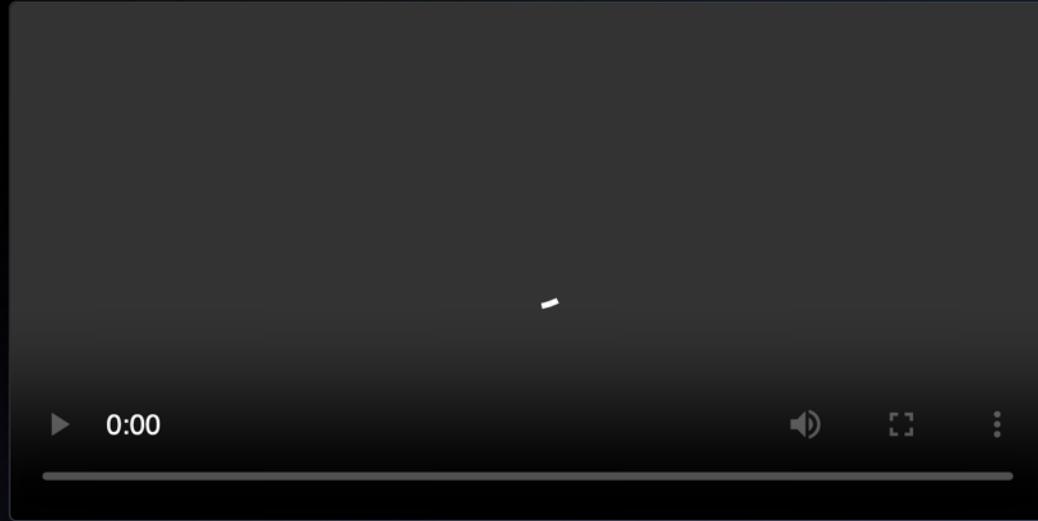
`eslint.style`

Configs in  VS Code

```
[  
  // Auto fix on save  
  "editor.codeActionsOnSave": {  
    "source.fixAll.eslint": "explicit"  
  },  
  
  // Silent the stylistic rules in your IDE,  
  // but still auto fix them  
  "eslint.rules.customizations": [  
    { "rule": "@stylistic/*", "severity": "off" }  
  ]  
}
```

# ESLint can be a... Codemod

antfu/eslint-plugin-command



# ESLint can be a... Linter for other Languages

Language	Plugin	Maintainers
 TypeScript	<code>@typescript-eslint</code>	 TYPESCRIPT-ESLINT  BRADZACHER  JOSHUAKGOLDBERG
 Vue	<code>eslint-plugin-vue</code>	 OTA-MESHI  VUEJS
 Svelte	<code>eslint-plugin-svelte</code>	 OTA-MESHI  SVELTEJS
 Astro	<code>eslint-plugin-astro</code>	 OTA-MESHI
 JSON	<code>eslint-plugin-jsonc</code>	 OTA-MESHI
 YAML	<code>eslint-plugin-yml</code>	 OTA-MESHI
 TOML	<code>eslint-plugin-toml</code>	 OTA-MESHI
 GraphQL	<code>graphql-eslint</code>	 DIMAMACHINA
 HTML	<code>html-eslint</code>	 YEONJUAN
 MDX	<code>eslint-mdx</code>	 JOUNQIN
 Other formats*	<code>eslint-plugin-format</code>	 ANTFU

ESLint RFC #99 – ESLint Language Plugins

# One for All

One config for all projects  
One tool for *everything*\*



★ 3.2k

# @antfu/eslint-config

Code Style ⚙️ Anthony Fu

## Quick Start

```
npx @antfu/eslint-config@latest
```

## Features

- Auto fix for formatting aimed to be used standalone **without** Prettier
- Reasonable defaults, best practices, only one line of config
- Work with TypeScript, JSX, Vue, JSON, YAML, Toml, Markdown, Out-of-box.
- Opinionated, but very customizable
- ESLint Flat config, compose easily!
- Optional React, Svelte, UnoCSS, Astro, Solid support
- Optional formatters support for formatting CSS, HTML, XML, etc.
- **Style principle:** Minimal for reading, stable for diff, consistent
  - Sorted imports, dangling commas
  - Single quotes, no semi
  - Using ESLint Stylistic
- Respects `.gitignore` by default
- Supports ESLint v9.0+ or v8.50.0+

# Thank you!

Slides on [antfu.me](http://antfu.me)