What I Learned from Maintaining Vue CLI

About Me

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CREATING A VUE PROJECT

The Good Old' `vue init`

- Lots of incompatible templates
- Scaffolding only
- Eject only
- Difficult upgrades

VUE CLI 3

Goals of CLI v3

- Reduce configuration fatigue
- Incorporate best practices
- Configurable and extensible

Install it now!

- `yarn global remove vue-cli`
- `yarn global add @vue/cli`

Getting Started

- `vue create my-app`
- `cd ./my-app`
- `yarn serve`
- `yarn build`

Built-in features

Webpack 4

Jest

Sass

Typescript

PWA

Modern mode

Cypress

Less

Web components

Mocha

Babel 7

Multi-page

Linting

Stylus

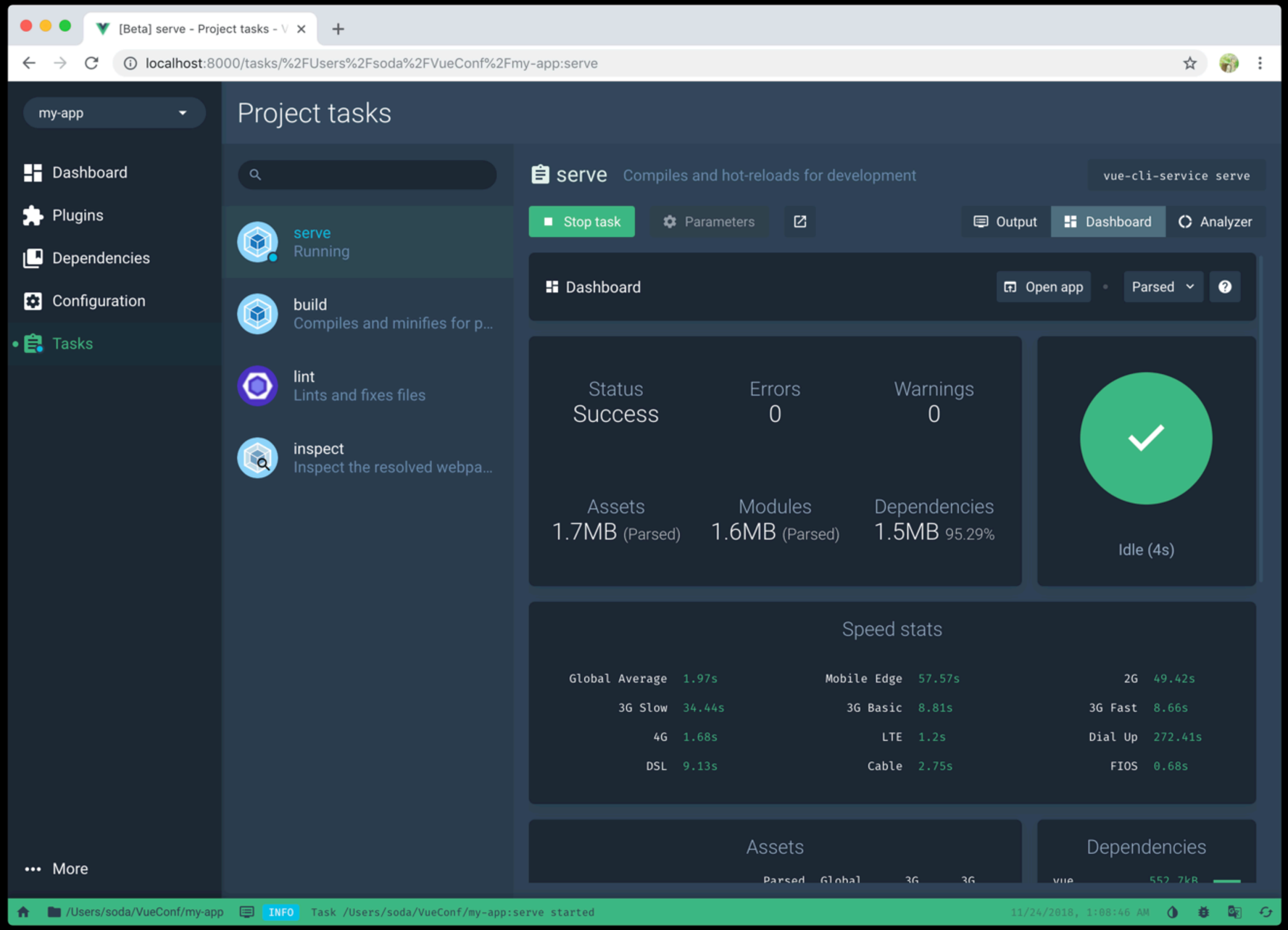
Nightwatch

Compatible while Futureproof

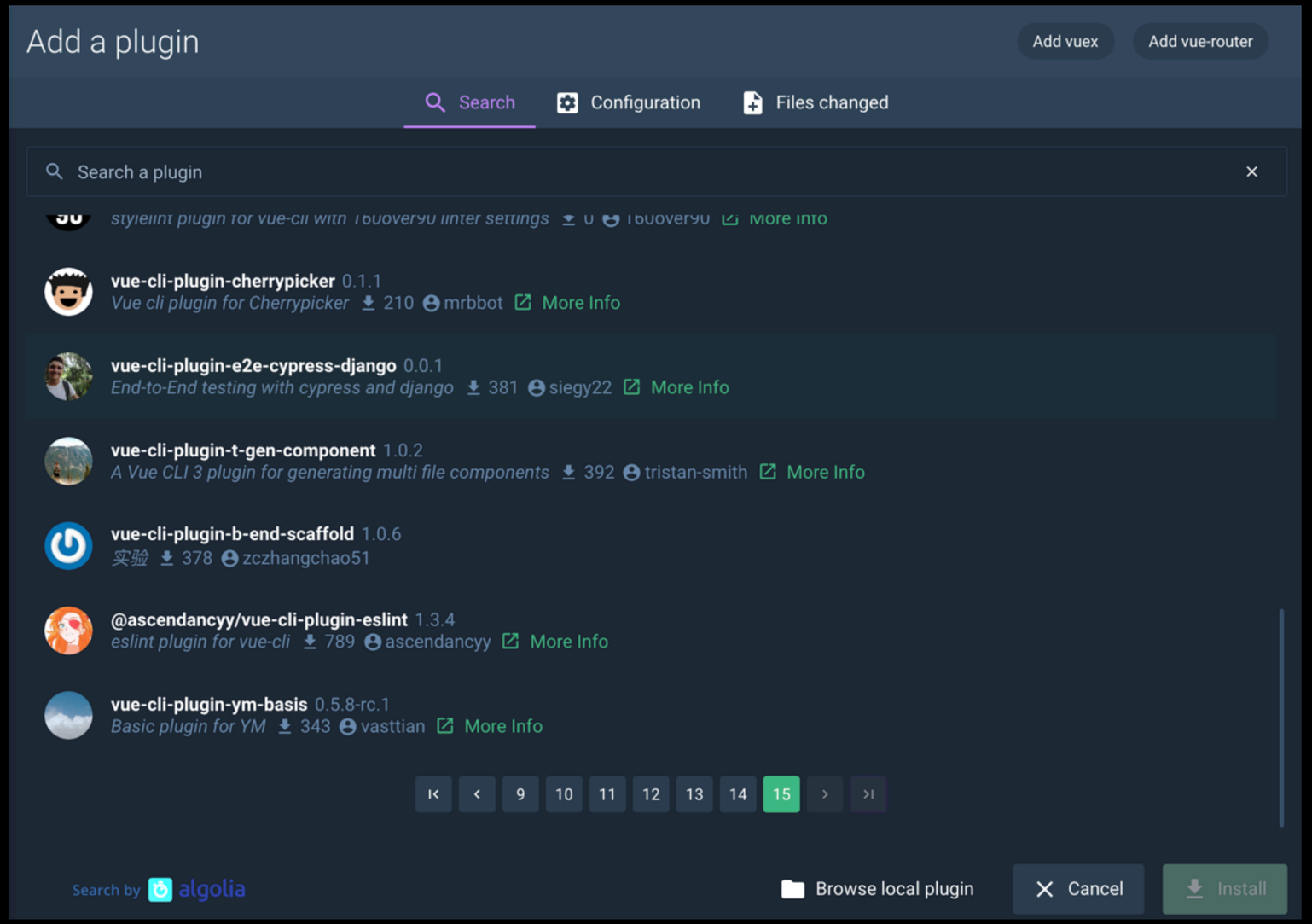
- Browserslist
- Web Components
- Modern Mode

Easy of Use

- Works out of the box
- Graphical User Interface (beta)


[Beta] serve - Project tasks -
localhost:8000/tasks/%2FUsers%2Fsoda%2FVueConf%2Fmy-app:serve
my-app
Project tasks
Dashboard
Plugins
Dependencies
Configuration
Tasks
More
serve
Running
build
Compiles and minifies for p...
lint
Lints and fixes files
inspect
Inspect the resolved webpa...
serve
Compiles and hot-reloads for development
vue-cli-service serve
Stop task
Parameters
Output
Dashboard
Analyzer
Dashboard
Open app
Parsed
Status
Success
Errors
0
Warnings
0
Assets
1.7MB (Parsed)
Modules
1.6MB (Parsed)
Dependencies
1.5MB 95.29%
Idle (4s)
Speed stats
Global Average 1.97s
3G Slow 34.44s
4G 1.68s
DSL 9.13s
Mobile Edge 57.57s
3G Basic 8.81s
LTE 1.2s
Cable 2.75s
2G 49.42s
3G Fast 8.66s
Dial Up 272.41s
FIOS 0.68s
Assets
Dependencies
/Users/soda/VueConf/my-app
INFO
Task /Users/soda/VueConf/my-app:serve started
11/24/2018, 1:08:46 AM

vue add some-plugin



LESSONS WE LEARNED

Responsibilities of a CLI

- Scaffolding
- Local Development
- Front-end Bundling

What’s so hard about CLI

Each extra dependency doubles the complexity

Zero Configuration

- Why?
- The Rise of Parcel
- Zero Config = Better Default Configs = Best Practices

Best Practices

front-end-performance-checklist-2018.pdf
from Vitaly Friedman (Smashing Magazine)

6

7

8

9

Front-End Performance Checklist 2018

*Below you'll find an overview of the **front-end performance issues** you might need to consider to ensure that your response times are fast and smooth.*

Get Ready: Planning and Metrics

- ☐ **Establish a performance culture.**
  As long as there is no alignment between teams, performance isn't going to sustain long-term. Study common complaints coming into customer service and see how improving performance can help relieve some of these problems. Build up a company-tailored case study with real data. Plan out a loading sequence and trade-offs during the design process.

- ☐ **Choose the right metrics.**
  Not every metrics is equally important. Study what metrics matter most: usually it will be related to how fast you can start render *most important* pixels and how quickly you can provide input responsiveness. Prioritize page loading as perceived by your customers. Time to Interactive, Hero Rendering Times, First Meaningful Paint, Speed Index usually matter.

Opinionated Choices

- ESLint Config: Standard / Prettier / Airbnb
- Test Frameworks: Mocha / Jest / …

Plugin-based Design

- Tackle one problem at a time
- Opt-in
- Good for contributing

Core Plugins

- Transpiler: None / Babel / TypeScript / TypeScript + Babel
- PWA: workbox
- ESLint: Airbnb / Standard / Prettier / TSLint
- Unit Tests: vue-test-utils + Jest / Mocha
- E2E Tests: Cypress / Nightwatch

Custom Config

Why?

- There’s no one-size-fits-all solution
- Community-driven researches

Custom Config: The Past

- Fork (vue-cli v2)
- Eject (creat-react-app)
- Partial modification on wrapped options (angular-cli < 6)
- Merge options (@angular-builders/custom-webpack)

Custom Config: Better Choice

- Limited Expressiveness of Plain Object
- Grunt => Gulp, .rc => .config.js
- Configuration DSL
- Functional Interface

chainWebpack

```
const path = require("path");

module.exports = {
  chainWebpack: config => {
    config.plugins.delete('prefetch')

    config.resolve.alias
      .set('vue$', 'vue/dist/vue.esm.js')

    // add plugin
    config
      .plugin('CompressionPlugin')
      .use(CompressionPlugin)

    config.plugin('html')
      .tap(args => {
        args[0].filename = path.resolve('../backend/templates/index.html');
        return args;
      });
  },
}
```

CLI Project Organization

- What’s wrong with distributed repositories?
  - Discoverability
  - Cross module refactoring
- Monorepo for the win!

Versioning

Versioning is HARD

- React 0.14 => 15.0
- Angular 2.4 => 4.0
- Angular CLI 1.7 => 6.0

Versioning in a Monorepo

- lerna
- force-publish? ❎
- fixed? ❎
- independent? ❎

Versioning of Vue CLI

- Keep plugin minors in sync
- Patch on demand
- Separate config-related packages

Reporting Issues

- `vue info`
- Coming in v3.2

1. soda@mbp: ~/Test/my-app (zsh)

```
→  my-app git:(master) vue info

Environment Info:

  System:
    OS: macOS 10.14.1
    CPU: (8) x64 Intel(R) Core(TM) i7-6820HQ CPU @ 2.70GHz
  Binaries:
    Node: 10.12.0 - ~/n/bin/node
    Yarn: 1.12.3 - /usr/local/bin/yarn
    npm: 6.4.1 - ~/n/bin/npm
  Browsers:
    Chrome: 70.0.3538.110
    Firefox: 63.0.1
    Safari: 12.0.1
  npmPackages:
    @vue/babel-preset-app:  3.1.1
    @vue/cli-overlay:  3.1.0
    @vue/cli-plugin-babel: ^3.1.1 => 3.1.1
    @vue/cli-plugin-eslint: ^3.1.5 => 3.1.5
    @vue/cli-service: ^3.1.4 => 3.1.4
    @vue/cli-shared-utils:  3.1.1
    @vue/component-compiler-utils:  2.3.0
    @vue/preload-webpack-plugin:  1.1.0
    @vue/web-component-wrapper:  1.2.0
    babel-helper-vue-jsx-merge-props:  2.0.3
    babel-plugin-transform-vue-jsx:  4.0.1
    eslint-plugin-vue: ^5.0.0-0 => 5.0.0-beta.4
    vue: ^2.5.17 => 2.5.17
    vue-eslint-parser:  3.2.2
    vue-hot-reload-api:  2.3.1
    vue-loader:  15.4.2
    vue-style-loader:  4.1.2
    vue-template-compiler: ^2.5.17 => 2.5.17
    vue-template-es2015-compiler:  1.6.0
  npmGlobalPackages:
    @vue/cli: Not Found
```

Upgradable

- Why?
- How?
- **Locality is the key**

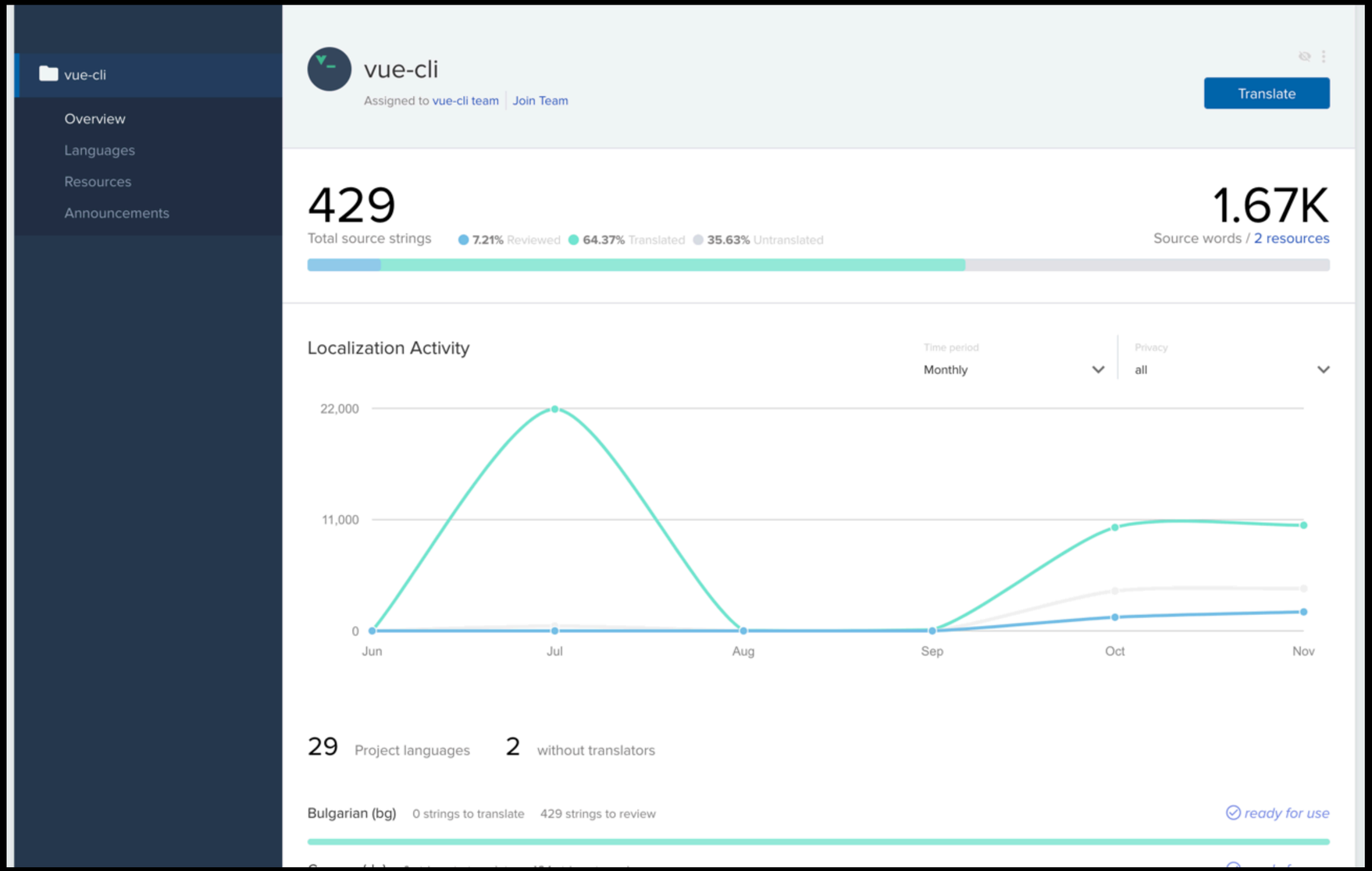
Upgradable

- Upgradable Plugin: Non-destructive User Configs
- Upgradable Dependencies: ~~`require`~~ `loadModule`
- Upgradable Template: Programmable Template Generator

Open Source i18n

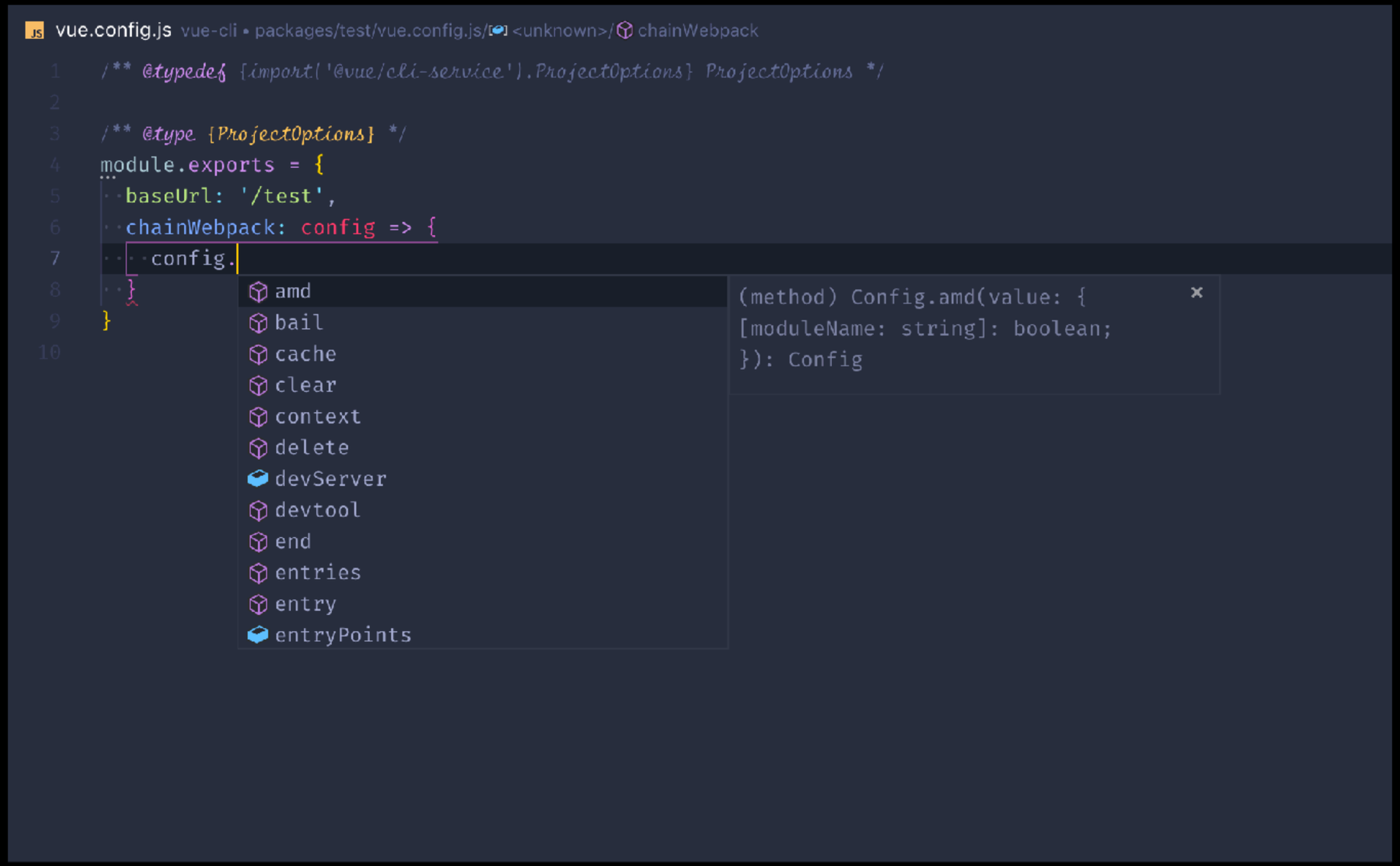
- Centralized or not?
- Problems with centralization
- Problems with distributed

Transifex


vue-cli
Overview
Languages
Resources
Announcements
vue-cli
Assigned to vue-cli team | Join Team
Translate
429
Total source strings
7.21% Reviewed
64.37% Translated
35.63% Untranslated
1.67K
Source words / 2 resources
Localization Activity
Time period
Monthly
Privacy
all
22,000
11,000
0
Jun
Jul
Aug
Sep
Oct
Nov
29 Project languages
2 without translators
Bulgarian (bg)
0 strings to translate
429 strings to review
ready for use

Coming Next

- `vue upgrade`
- Better error overlay
- Better TypeScript support


vue.config.js vue-cli • packages/test/vue.config.js/ <unknown>/ chainWebpack
/** @typedef {import('@vue/cli-service').ProjectOptions} ProjectOptions */
/** @type {ProjectOptions} */
module.exports = {
baseUrl: '/test',
chainWebpack: config => {
config.
}
}
amd
bail
cache
clear
context
delete
devServer
devtool
end
entries
entry
entryPoints
(method) Config.amd(value: {
[moduleName: string]: boolean;
}): Config

Thanks!