

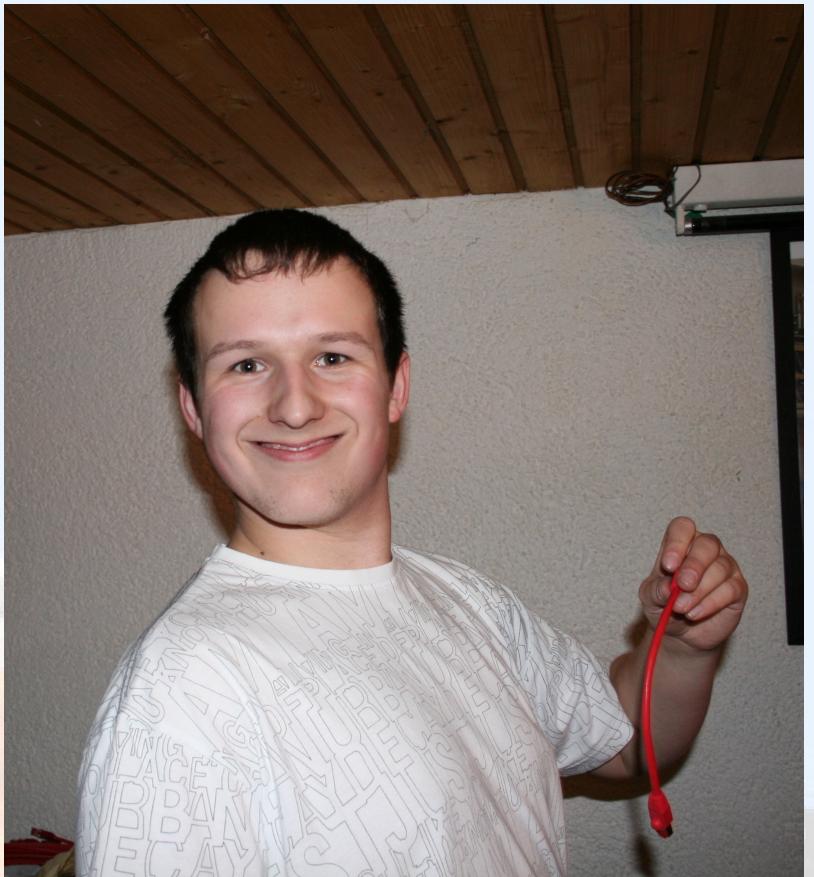
Vox Pupuli - Behind every successful open source  
project is a vibrant community

# Vox Pupuli - Behind every successful open source project is a vibrant community

How to grow an online community to over 180 people managing over 250 projects

## \$ whoami

- Tim 'bastelfreak' Meusel
- Puppet Contributor since 2012
- Merging stuff on [Vox Pupuli](#) (Puppet Community) since 2015
- Vox Pupuli Project Management Committee member
- Living in Cologne, Germany
- Senior IT Automation Consultant at [betadots](#)



What is  
Puppet?

# Puppet

- Infrastructure as Code (IaC) Software

What?



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# Puppet

## What?

- Infrastructure as Code (IaC) Software
- Brings its own declarative Language, Puppet DSL



# Puppet

## What?

- Infrastructure as Code (IaC) Software
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- Invented/Owned by Puppet Inc (acquired by Perforce)



# Puppet

## What?

- Infrastructure as Code (IaC) Software
- Brings its own declarative Language, Puppet DSL
- Invented/Owned by Puppet Inc (acquired by Perforce)
- Apache 2 license (with CLA)



# Puppet

What?

How?

example class to manage nginx:

```
class nginx (
  Sensitive[String[1]] $content,
) {
  package { 'nginx':
    ensure => 'installed',
  }
  -> file { '/etc/nginx/nginx.conf':
    ensure => 'file',
    content => $content,
  }
  ~> service { 'nginx':
    ensure => 'running',
    enable => true,
  }
}
```



# Puppet

What?

How?

- one or multiple classes are organised in a Puppet Module
  - glorified .tar.gz archive
- similar to a Ruby gem or Python Package
- Usually each Puppet Modules lives in its own Git(Hub) repository
- A module is focussed on managing a specific software component



Who uses  
open source software?



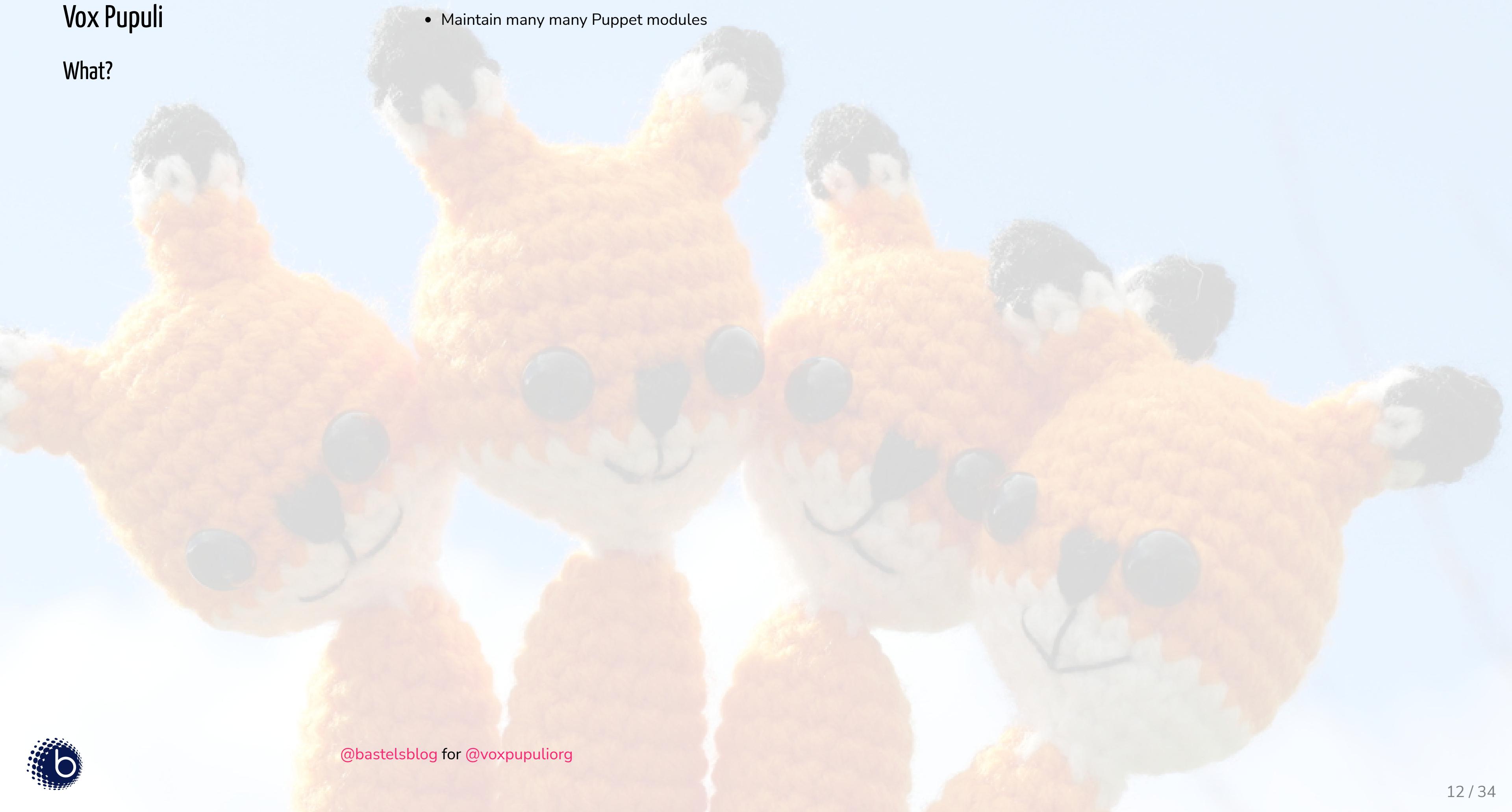
Who wanted to  
report a bug?

Who uses dead  
open source software?

What's this  
Vox Pupuli thingy?

- Maintain many many Puppet modules

What?



# Vox Pupuli

What?

- Maintain many many Puppet modules
  - And Rubygems!



# Vox Pupuli

What?

- Maintain many many Puppet modules
  - And Rubygems!
- Be helpful and polite to each other



# Vox Pupuli

## What?

- Maintain many many Puppet modules
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- Be open-minded to people and technology



# Vox Pupuli

What?

- Maintain many many Puppet modules
  - And Rubygems!
- Be helpful and polite to each other
- Be open-minded to people and technology
- Provide a home for orphaned Puppet modules



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## What?

- Maintain many many Puppet modules
  - And Rubygems!
- Be helpful and polite to each other
- Be open-minded to people and technology
- Provide a home for orphaned Puppet modules
- Unite lonely module and tooling authors to a collective



# Vox Pupuli

## What?

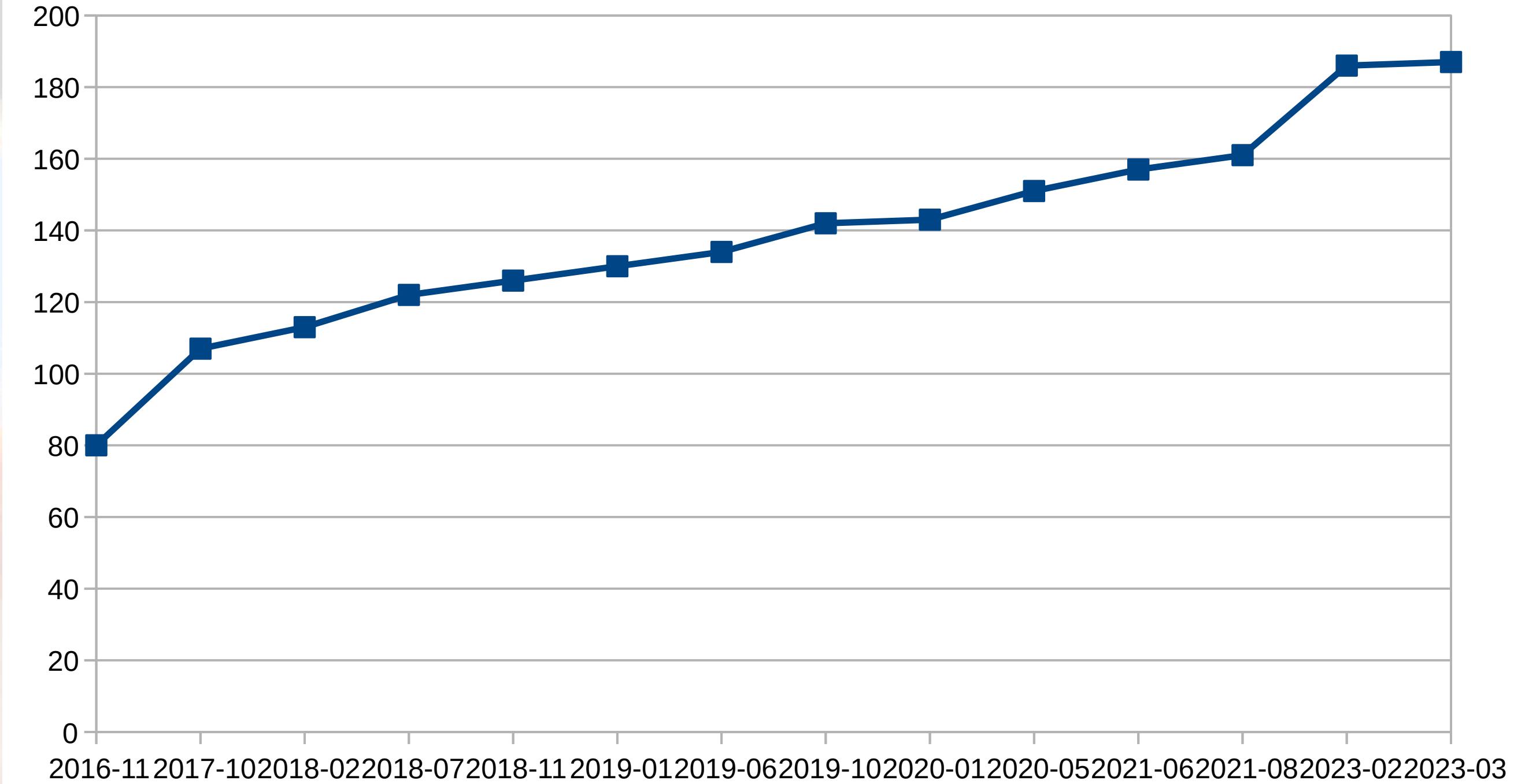
- Maintain many many Puppet modules
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- Be helpful and polite to each other
- Be open-minded to people and technology
- Provide a home for orphaned Puppet modules
- Unite lonely module and tooling authors to a collective
- Ensure continued development for our code



What?

Who?

- Amount of Vox Pupuli members with merge permissions



# Vox Pupuli

What?

Who?

- Many git newbies
  - Rebasing a feature branch against upstream master is hard



# Vox Pupuli

What?

- Many git newbies
  - Rebasing a feature branch against upstream master is hard
- Many newcomers to test frameworks
  - Interested in learning RuboCop/puppet-lint/rspec-puppet/serverspec

Who?



@bastelsblog for @voxpupuli.org

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  - Use Puppet at work and want to use public modules

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- ~~Many administrators of legacy infrastructures~~

Who?



# Vox Pupuli

- Maintaining a (successful) FOSS project on your own is hard

What?

Who?

Why?



@bastelsblog for @voxpupuliorg

# Vox Pupuli

What?

Who?

Why?

- Maintaining a (successful) FOSS project on your own is hard
  - successful implies documentation
- More users → more bugreports and feature requests



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# Vox Pupuli

What?

- Maintaining a (successful) FOSS project on your own is hard
  - successful implies documentation
- More users → more bugreports and feature requests
- People loose interest, lack time, burnout
- Vox Pupuli wants to prevent this
  - with a big group of collaborators and efficient tooling

Who?

Why?



How does  
Vox Pupuli work?

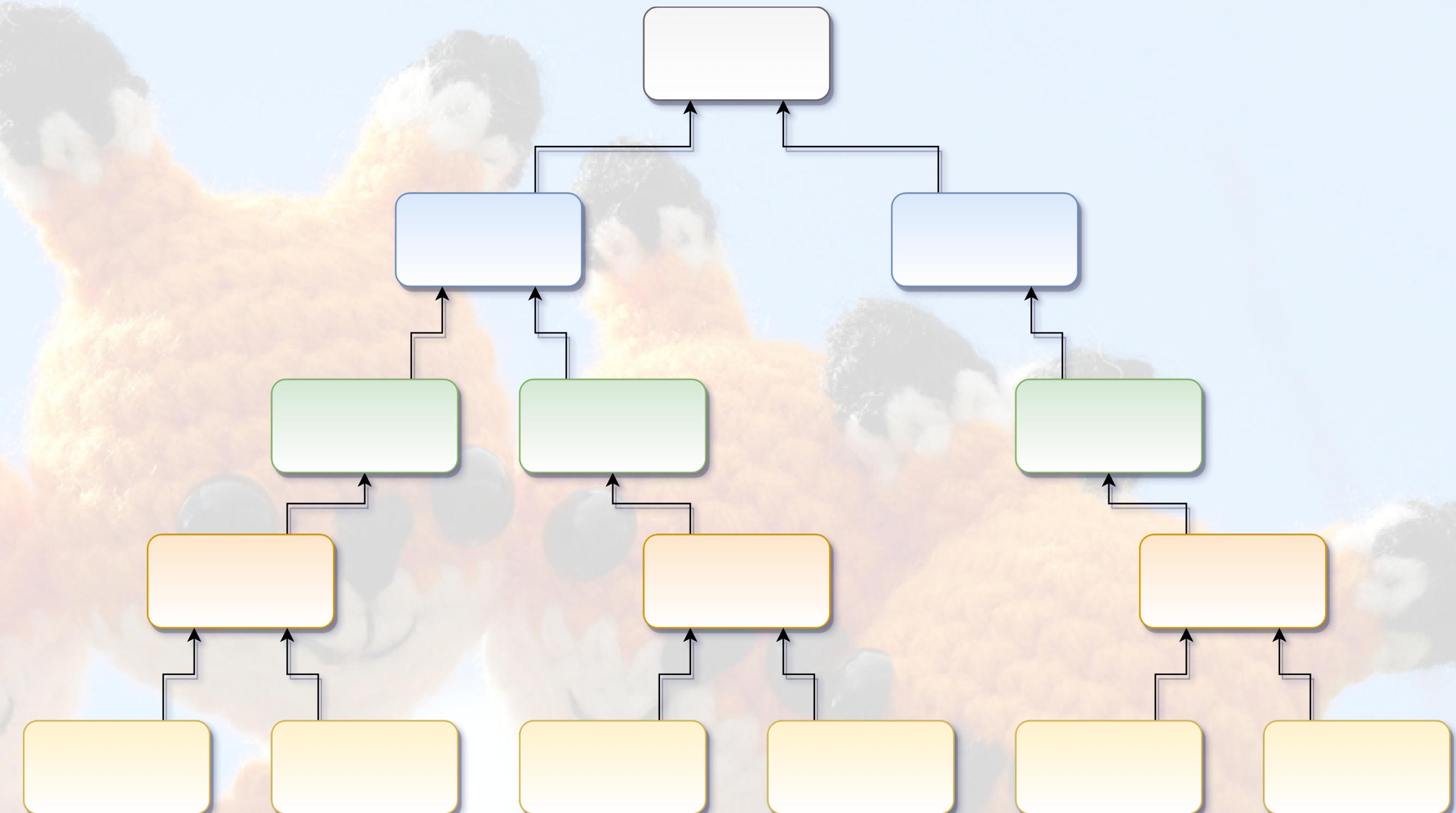
# Vox Pupuli

# What?

## Who?

## Why?

## How?



What?

Who?

Why?

How?

Collaborators

Project Management  
Committee



- Style guide and coding best practices are important!

What?

Who?

Why?

How?



# Vox Pupuli

- Style guide and coding best practices are important!
  - Write down every discussion about it, document it!

What?

Who?

Why?

How?



# Vox Pupuli

What?

Who?

Why?

How?

- Style guide and coding best practices are important!
  - Write down every discussion about it, document it!
  - It's okay to update a style guide or revert a decision



# Vox Pupuli

What?

Who?

Why?

How?

- Style guide and coding best practices are important!
  - Write down every discussion about it, document it!
  - It's okay to update a style guide or revert a decision
- Our styleguide: [voxpupuli.org/docs/reviewing\\_pr](http://voxpupuli.org/docs/reviewing_pr)



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Why?

- Over time our guidelines got adopted by many companies and Puppet itself
  - It's the defacto standard for the Puppet language

How?



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- A styleguide brings more value if you can enforce it



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Why?

- It's the defacto standard for the Puppet language
- A styleguide brings more value if you can enforce it
  - puppet-lint, rubocop, metadata-json-lint

How?



# Vox Pupuli

- A CI system is important!
  - Provide feedback fast, reduce required review time

What?

Who?

Why?

How?



# Vox Pupuli

What?

Who?

Why?

How?

- A CI system is important!
  - Provide feedback fast, reduce required review time
- Use code annotations!



# Vox Pupuli

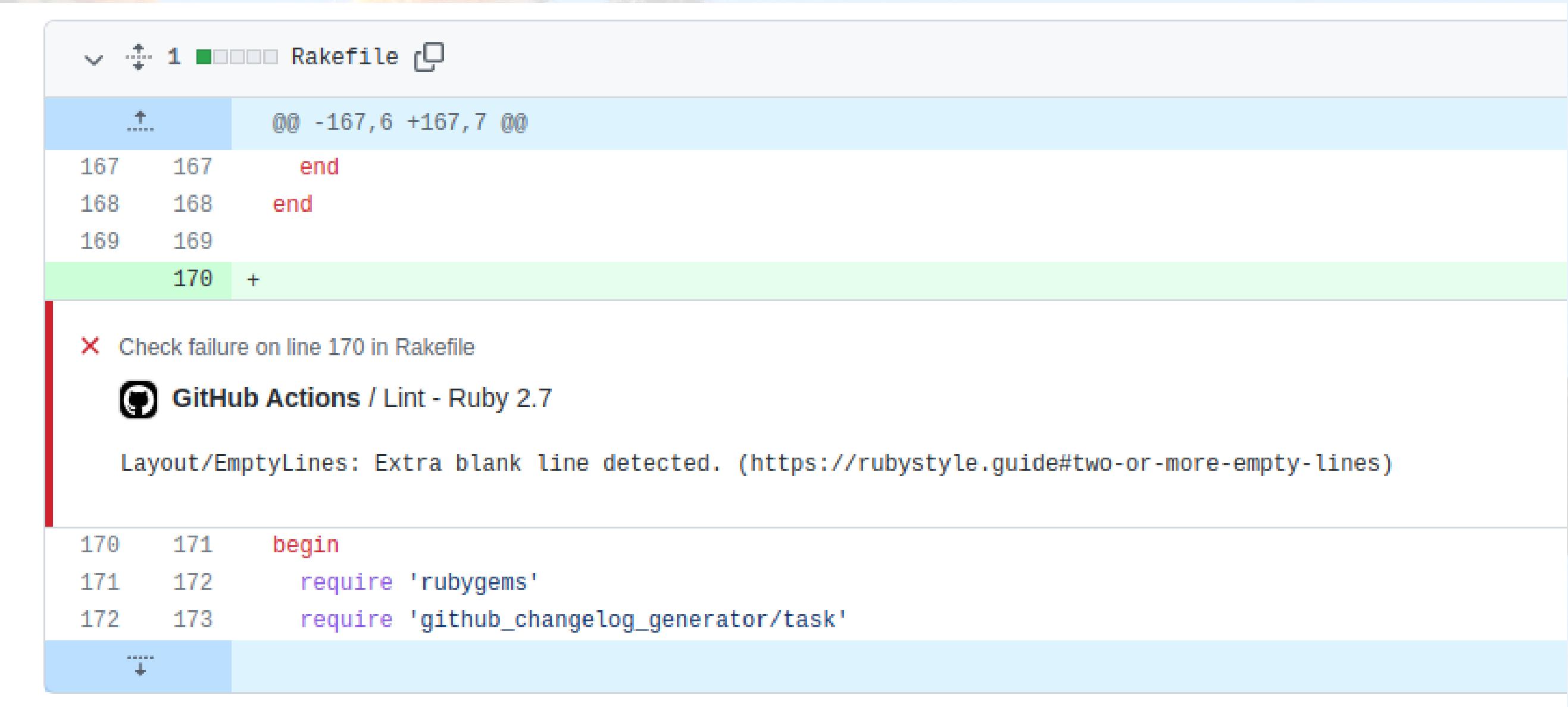
What?

Who?

Why?

How?

- A CI system is important!
  - Provide feedback fast, reduce required review time
- Use code annotations (RuboCop)!



The screenshot shows a GitHub Actions workflow step for 'GitHub Actions / Lint - Ruby 2.7'. It displays a diff of the 'Rakefile' with the following content:

```
diff --git a/Rakefile b/Rakefile
index 167,6..167,7 100
--- a/Rakefile
+++ b/Rakefile
@@ -167,6 +167,7 @@
167 167      end
168 168      end
169 169
170 170  +

```

A red error icon is shown next to line 170, indicating a failure. The error message is:

**X Check failure on line 170 in Rakefile**

**GitHub Actions / Lint - Ruby 2.7**

Layout/EmptyLines: Extra blank line detected. (<https://rubystyle.guide#two-or-more-empty-lines>)

The failing code block is:

```
begin
require 'rubygems'
require 'github_changelog_generator/task'
```



What?

Who?

Why?

How?

- A CI system is important!
  - Provide feedback fast, reduce required review time
- Use code annotations (RuboCop, puppet-lint)!

▼ ✨ 1 manifests/init.pp ⌂

↑ @@ -6,6 +6,7 @@

```
6   6 class example (
7   7     Stdlib::AbsolutePath $file = '/tmp/puppet-example',
8   8       String[1] $content = 'Hello World!',
9 +  String[1] $foo = 'test',
```

⚠ Check warning on line 9 in manifests/init.pp

## ⌚ GitHub Actions / Puppet / Static validations

missing documentation for class parameter example::foo (check: parameter\_documentation)

```
9   10   ) {
10   11     file { $file:
11   12       ensure => file,
```



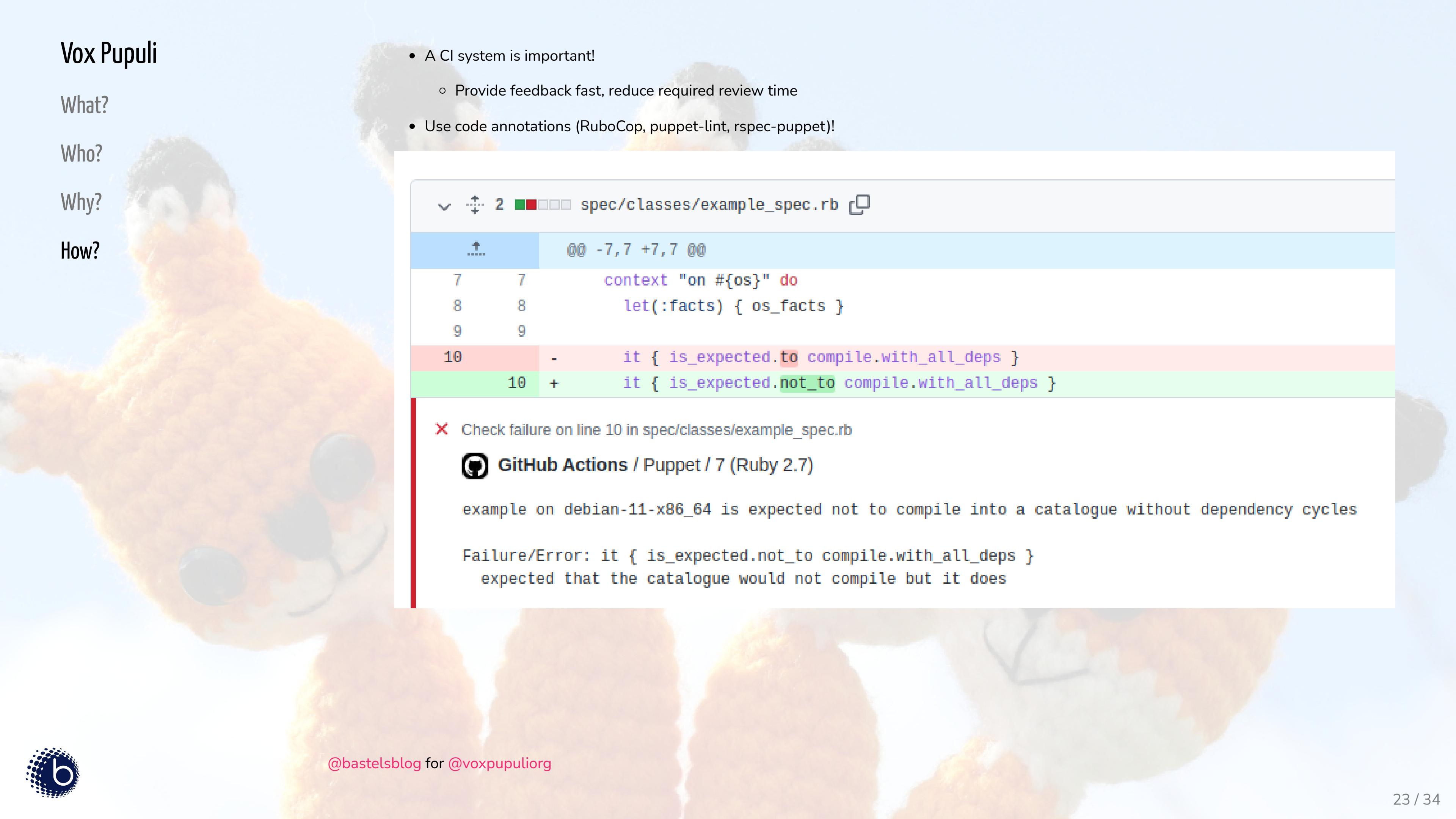
What?

Who?

Why?

How?

- A CI system is important!
  - Provide feedback fast, reduce required review time
- Use code annotations (RuboCop, puppet-lint, rspec-puppet)!



```
✓ ✨ 2 🟢🔴🟡🟠 spec/classes/example_spec.rb □
  † 00 -7,7 +7,7 00
  7   7     context "on #{os}" do
  8   8       let(:facts) { os_facts }
  9   9
 10  -     it { is_expected.to compile.with_all_deps }
 10  +     it { is_expected.not_to compile.with_all_deps }

✖ Check failure on line 10 in spec/classes/example_spec.rb
GitHub Actions / Puppet / 7 (Ruby 2.7)
example on debian-11-x86_64 is expected not to compile into a catalogue without dependency cycles
Failure/Error: it { is_expected.not_to compile.with_all_deps }
expected that the catalogue would not compile but it does
```



# Vox Pupuli

- A CI system is important!
- A CI system should provide feedback as soon as possible

What?

Who?

Why?

How?



# Vox Pupuli

- A CI system is important!
- A CI system should provide feedback as soon as possible

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Who?

Why?

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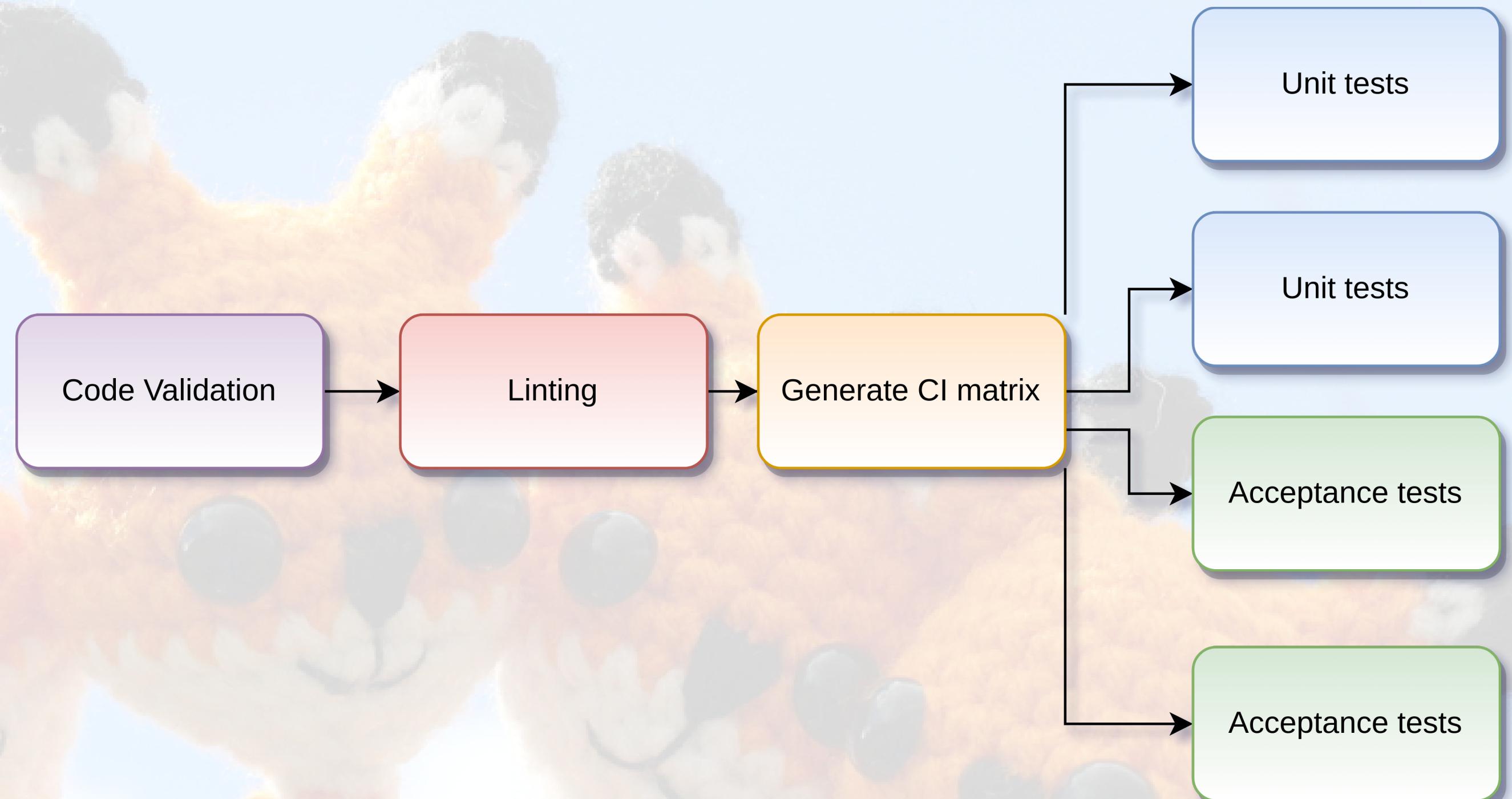
# Vox Pupuli

What?

Who?

Why?

How?



# Vox Pupuli

- CI Matrix generation

What?

Who?

Why?

How?



# Vox Pupuli

What?

Who?

Why?

How?

- CI Matrix generation
- jq .requirements[0] metadata.json

```
{  
  "name": "puppet",  
  "version_requirement": ">= 6.1.0 < 8.0.0"  
}
```



# Vox Pupuli

What?

- CI Matrix generation
- jq .requirements[0] metadata.json

```
{  
  "name": "puppet",  
  "version_requirement": ">= 6.1.0 < 8.0.0"  
}
```

Who?

Why?

How?

- jq .operatingsystem\_support[0] metadata.json

```
{  
  "operatingsystem": "RedHat",  
  "operatingsystemrelease": [  
    "6",  
    "7"  
  ]  
}
```



# Vox Pupuli

What?

Who?

Why?

How?

- CI Matrix generation
- It is documented! [github.com/voxpupuli/gha-puppet](https://github.com/voxpupuli/gha-puppet)



# Vox Pupuli

What?

Who?

Why?

How?

- CI Matrix generation
- It is documented! [github.com/voxpupuli/gha-puppet](https://github.com/voxpupuli/gha-puppet)
- It's a shared workflow and others can use it!

```
name: CI

on: pull_request

concurrency:
  group: ${{ github.ref_name }}
  cancel-in-progress: true

jobs:
  puppet:
    name: Puppet
    uses: voxpopuli/gha-puppet/.github/workflows/basic.yml@v1
```



# Vox Pupuli

What?

- CI Matrix generation
- It is documented! [github.com/voxpupuli/gha-puppet](https://github.com/voxpupuli/gha-puppet)
- It's a shared workflow and others can use it!
- Everything can be run locally: [voxpupuli.org/docs/how\\_to\\_run\\_tests](https://voxpupuli.org/docs/how_to_run_tests)

Who?

Why?

How?



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What?

- CI Matrix generation
- It is documented! [github.com/voxpupuli/gha-puppet](https://github.com/voxpupuli/gha-puppet)
- It's a shared workflow and others can use it!
- Everything can be run locally: [voxpupuli.org/docs/how\\_to\\_run\\_tests](https://voxpupuli.org/docs/how_to_run_tests)
- Add a CONTRIBUTING.md to a module

Who?

Why?

How?



# Vox Pupuli

- Each project has some boilerplate stuff
  - Rakefile, directory structure, CONTRIBUTING.md

What?

Who?

Why?

How?



# Vox Pupuli

What?

- Each project has some boilerplate stuff
  - Rakefile, directory structure, CONTRIBUTING.md
- modulesync was developed by Puppet Inc, moved to Vox Pupuli
- It takes a config file + templates, throws it into every modules git repo
- Source Code: [github.com/voxpupuli/modulesync](https://github.com/voxpupuli/modulesync)

Who?

Why?

How?



# Vox Pupuli

What?

Who?

Why?

How?

- Our config repo: [github.com/voxpupuli/modulesync\\_config](https://github.com/voxpupuli/modulesync_config)

 <b>bastelfreak</b> Merge pull request #815 from bastelfreak/modulefile ...	✓ c0433f4 last week	⌚ 1,589 commits
📁 .github	Use ruby/setup-ruby in workflow testing	3 years ago
📁 bin	Correct program name in bump-dependency-upper-bound	2 years ago
📁 moduleroot	Rework release preparation tasks	2 weeks ago
📄 .gitignore	add .vendor to gitignore	7 years ago
📄 CHANGELOG.md	Release 5.4.0	3 months ago
📄 CONTRIBUTING.md	(GH-226) Add CHANGELOG	5 years ago
📄 Gemfile	Gemfile: use singlequotes for Strings	last year
📄 LICENSE	Remove extra blank line at EOF.	4 years ago
📄 README.md	Relase 5.0.0	2 years ago
📄 Rakefile	Explicitly require YAML in Rakefile	9 months ago
📄 config_defaults.yml	Purge legacy Modulefile in modules	last week
📄 managed_modules.yml	Add module puppet-varnish	2 weeks ago
📄 modulesync.yml	Add vim modelines to everything and change PC->VP. Fixes #150.	7 years ago



# The Conclusion

- Document how your team works
- Try to develop publicly, even corporate code
- Document your style guide
- Document your projects



# Vox Pupuli

- We have great tooling and automation
- We have great people
- You need help with Puppet?
  - Let us know, we help out!
- You have an orphaned module or know one?
  - Ping us, migrate it to us
- You have domain specific knowledge?
  - Ruby, Python, Rspec, Beaker, \$software we automate
- Sponsor us through [GitHub sponsors](#) or [OpenCollective](#)



# Vox Pupuli

- IRC #voxpupuli on Libera.Chat
- Mailinglist: [voxpupuli@groups.io](mailto:voxpupuli@groups.io)
- For feedback: `bastelfreak` on [slack.puppet.com/](https://slack.puppet.com/)Libera.Chat IRC or [tim@bastelfreak.de](mailto:tim@bastelfreak.de)
- This talk and previous ones: [github.com/bastelfreak/talks](https://github.com/bastelfreak/talks)

Thanks for your attention!



# Vox Pupuli

- Our Website! [voxpupuli.org/docs/](http://voxpupuli.org/docs/)
- CI Setup: [github.com/voxpupuli/gha-puppet](https://github.com/voxpupuli/gha-puppet)
- unit tests: [github.com/voxpupuli/voxpupuli-test](https://github.com/voxpupuli/voxpupuli-test)
- Acceptance tests: [github.com/voxpupuli/voxpupuli-acceptance](https://github.com/voxpupuli/voxpupuli-acceptance)
- Release tooling: [github.com/voxpupuli/voxpupuli-release](https://github.com/voxpupuli/voxpupuli-release)
- Our modulesync\_config repo: [github.com/voxpupuli/modulesync\\_config](https://github.com/voxpupuli/modulesync_config)





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