

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

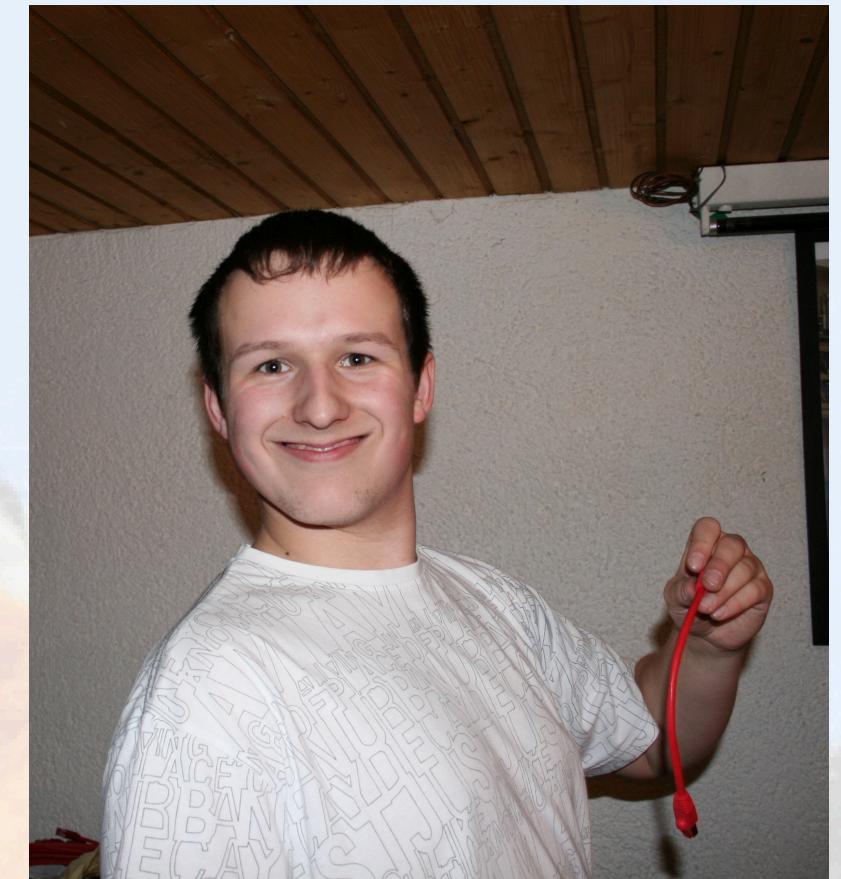


Vox Pupuli - Behind every successful open source project is a vibrant community

How to grow an online community to over 210 people managing over 300 projects

\$ whoami

- Tim 'bastelfreak' Meusel
- Puppet User since 2012
- Merging stuff on [Vox Pupuli](#) since 2015
- Senior IT Automation Consultant at [betadots](#)
- Puppet Solution Consultant
- Vox Pupuli PMC member



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

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Puppet

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

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Puppet

What?

- Infrastructure as Code (IaC) Software
- Brings its own declarative Language, Puppet DSL
- Invented/Owned by Puppet Inc (acquired by Perforce)
- Apache-2.0 license (with CLA)

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Puppet

What?

How?

example class to manage nginx:

```
# @summary configures nginx in a bad way
# @param content the whole nginx config
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

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Puppet

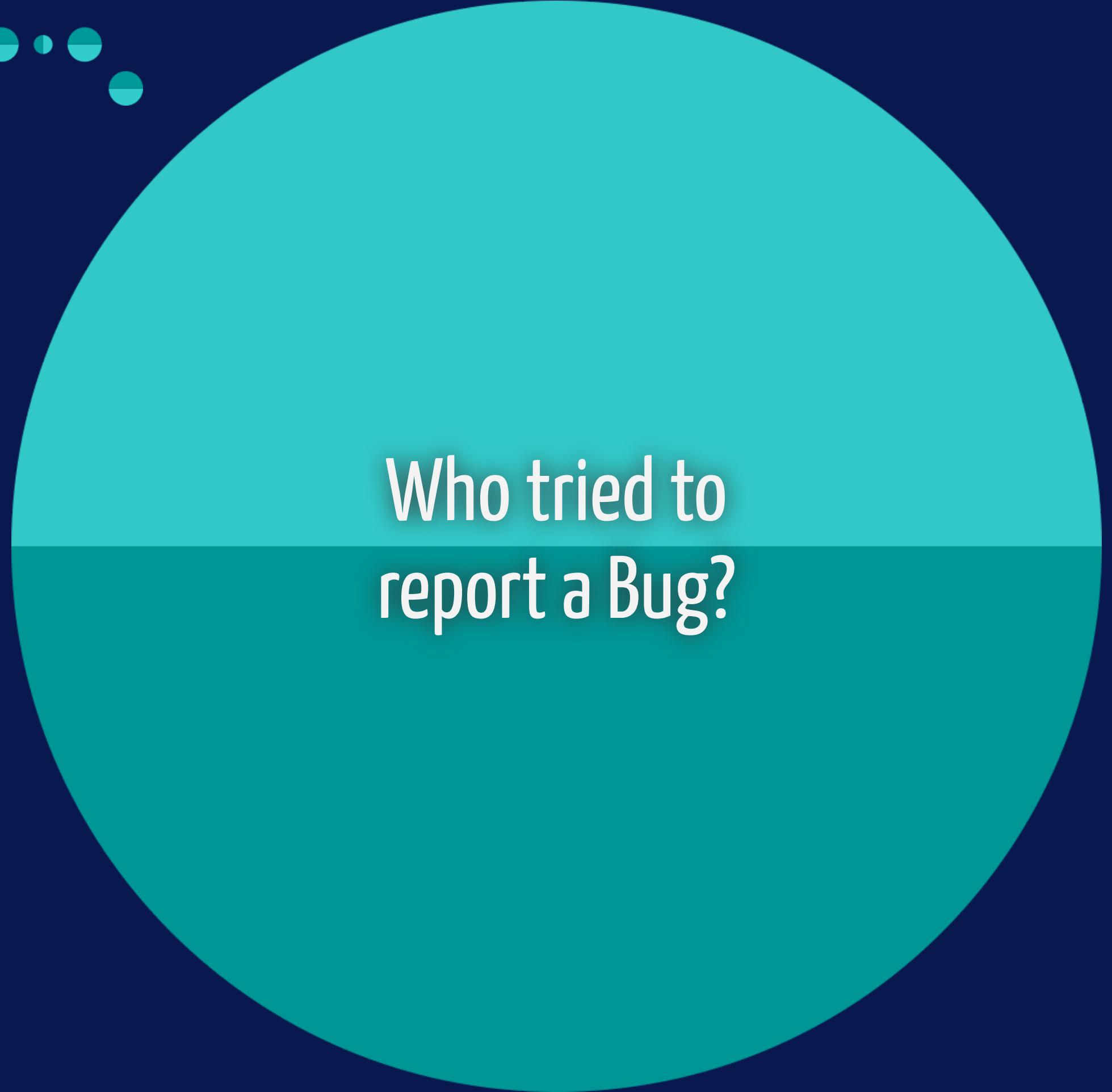
What?

How?

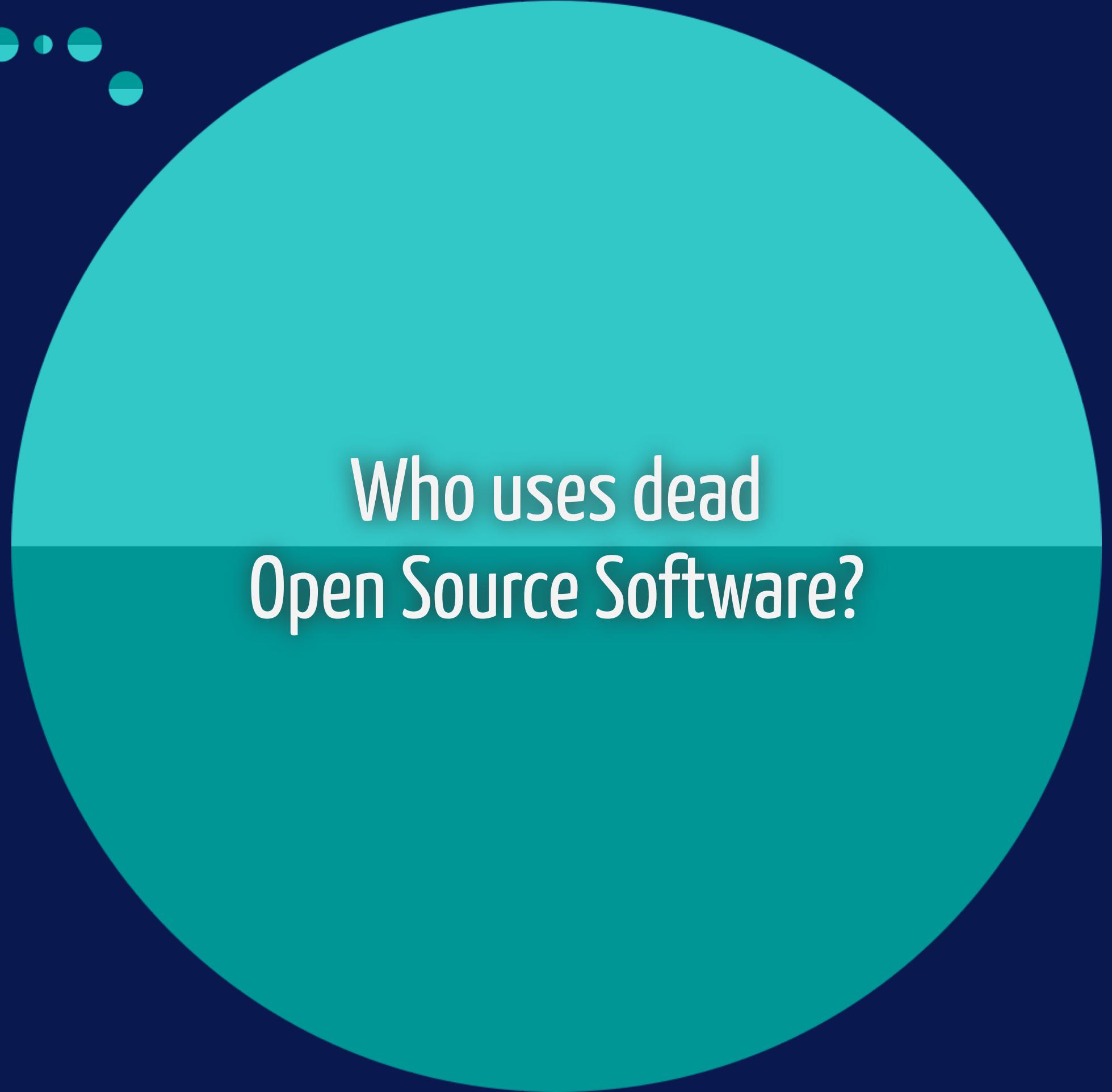
- one or multiple classes are organised in a Puppet Module
 - glorified .tar.gz archive
- similar to a Ruby gem or Python package
- Usually each Puppet Modules lives in its own Git(Hub) repository
- A module is focussed on managing a specific software component



Who uses
Open Source Software?



Who tried to
report a Bug?



Who uses dead
Open Source Software?



What is this
Vox Pupuli thingy?

- Maintain many many Puppet modules

What?



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Vox Pupuli

What?

- Maintain many many Puppet modules
 - And Ruby gems!

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What?

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

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What?

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

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What?

- Maintain many many Puppet modules
 - And Ruby gems!
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- Provide a home for orphaned Puppet modules

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What?

- Maintain many many Puppet modules
 - And Ruby gems!
- Be helpful and polite to each other
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- Provide a home for orphaned Puppet modules
- Unite lonely module and tooling authors to a collective

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What?

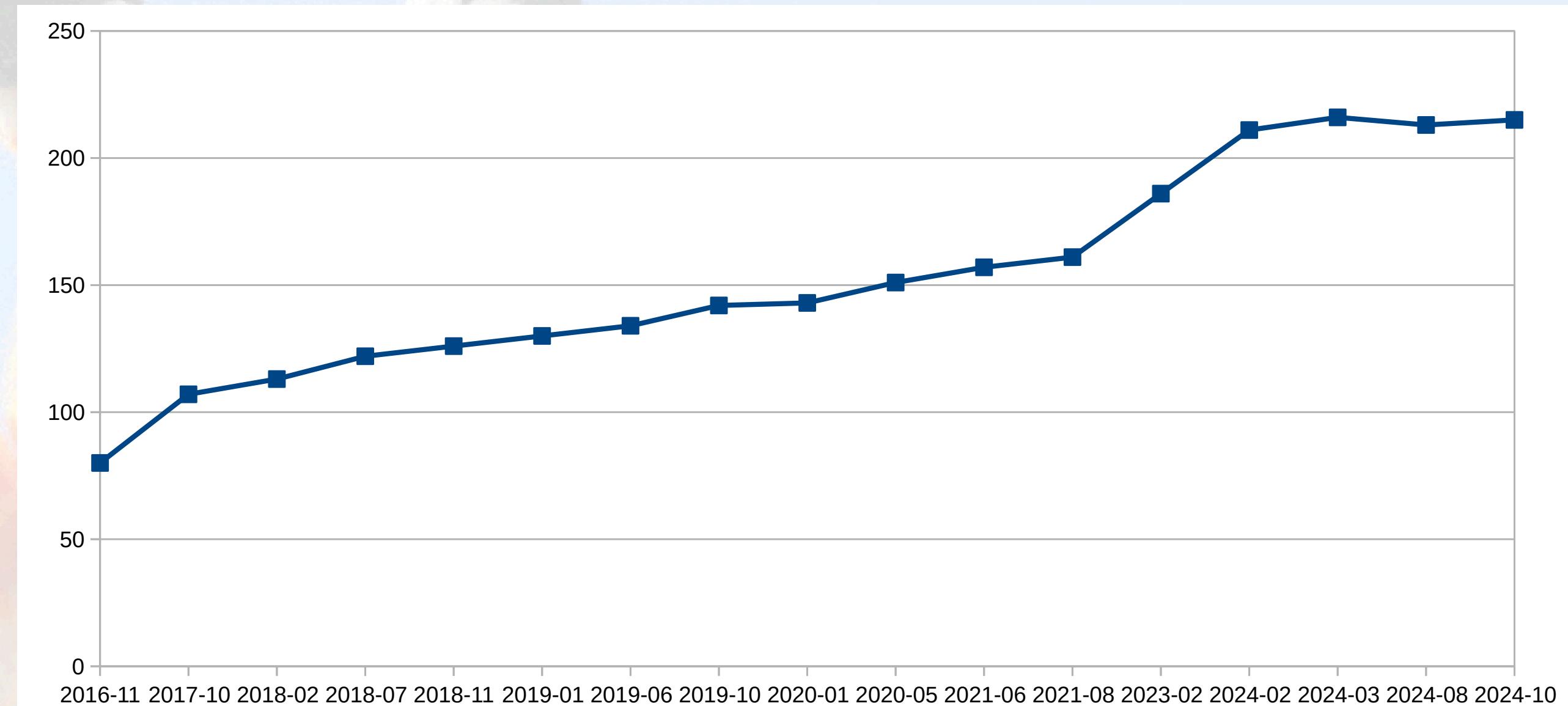
- Maintain many many Puppet modules
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- Be helpful and polite to each other
- Be open-minded to people and technology
- Provide a home for orphaned Puppet modules
- Unite lonely module and tooling authors to a collective
- Ensure continued development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



What?

Who?

Members in the Vox Pupuli GitHub Org



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Vox Pupuli

What?

Who?

- Many git newbies
 - `git rebase` is hard

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Vox Pupuli

What?

Who?

- Many git newbies
 - `git rebase` is hard
- Many newcomers to test frameworks
 - Interested in learning RuboCop/puppet-lint/rspec-puppet/serverspec

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- SRE/DevOps/Platform/Systems Engineers in a tiny team
 - Use Puppet at work and want to use public modules



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 - Interested in learning RuboCop/puppet-lint/rspec-puppet/serverspec
- SRE/DevOps/Platform/Systems Engineers in a tiny team
 - Use Puppet at work and want to use public modules
- Consultants that contribute to a few modules for a period of time



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

What?

Who?

Why?



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Vox Pupuli

What?

Who?

Why?

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

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Vox Pupuli

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- More users → more bugreports and feature requests

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Vox Pupuli

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Who?

Why?

- 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

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How does
Vox Pupuli work?

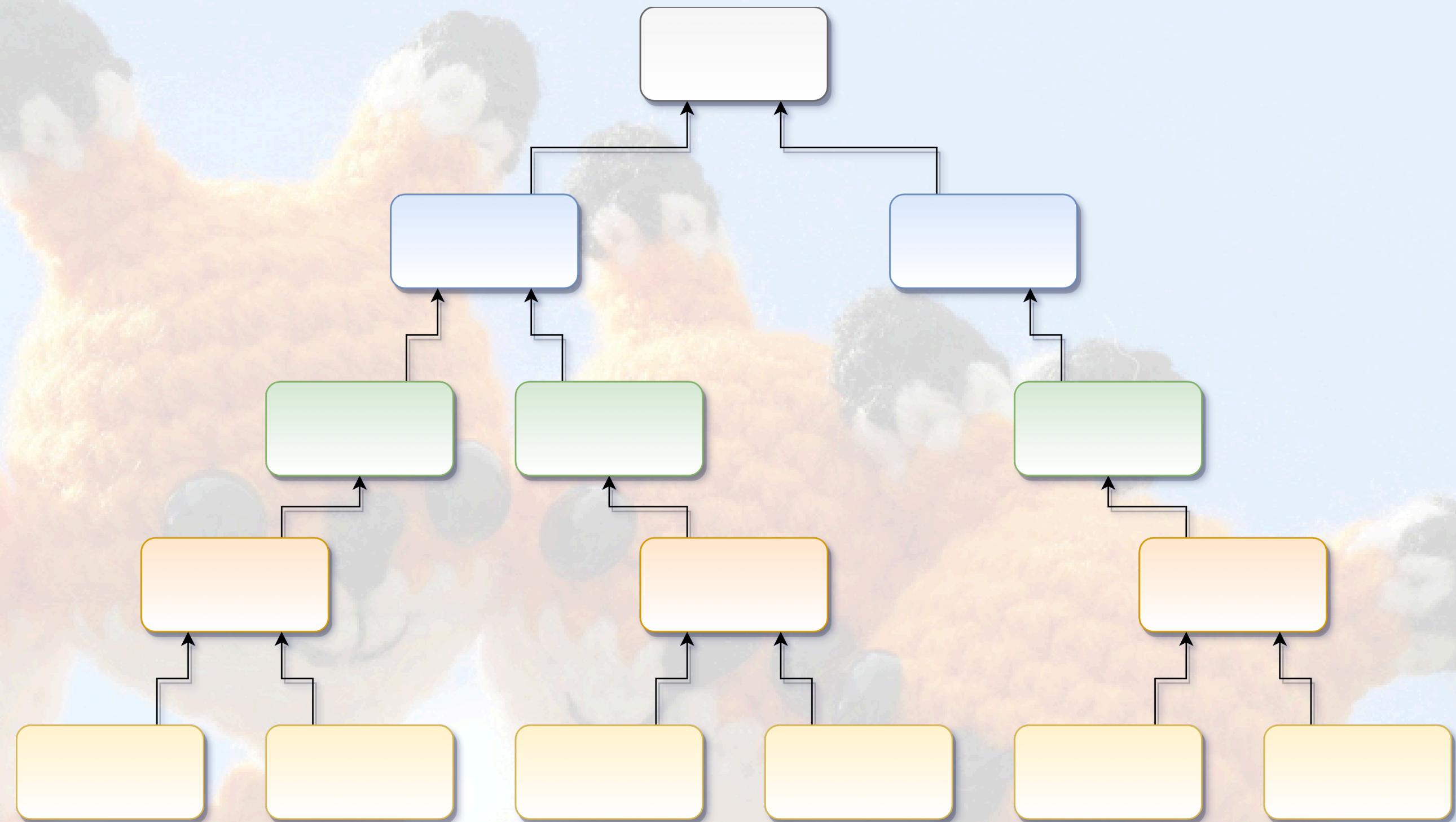
Vox Pupuli

What?

Who?

Why?

How?



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Vox Pupuli

What?

Who?

Why?

How?

Collaborators

Project Management
Committee

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- Style guide and coding best practices are important!

What?

Who?

Why?

How?

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What?

Who?

Why?

How?

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

What?

Who?

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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?

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How?

- Style guide and coding best practices are important!
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- Our styleguide: voxpupuli.org/docs/reviewing_pr

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Who?

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 - It's the defacto standard for the Puppet language



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 - puppet-lint, rubocop, metadata-json-lint



Vox Pupuli

What?

Who?

Why?

How?

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

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Vox Pupuli

What?

Who?

Why?

How?

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

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Vox Pupuli

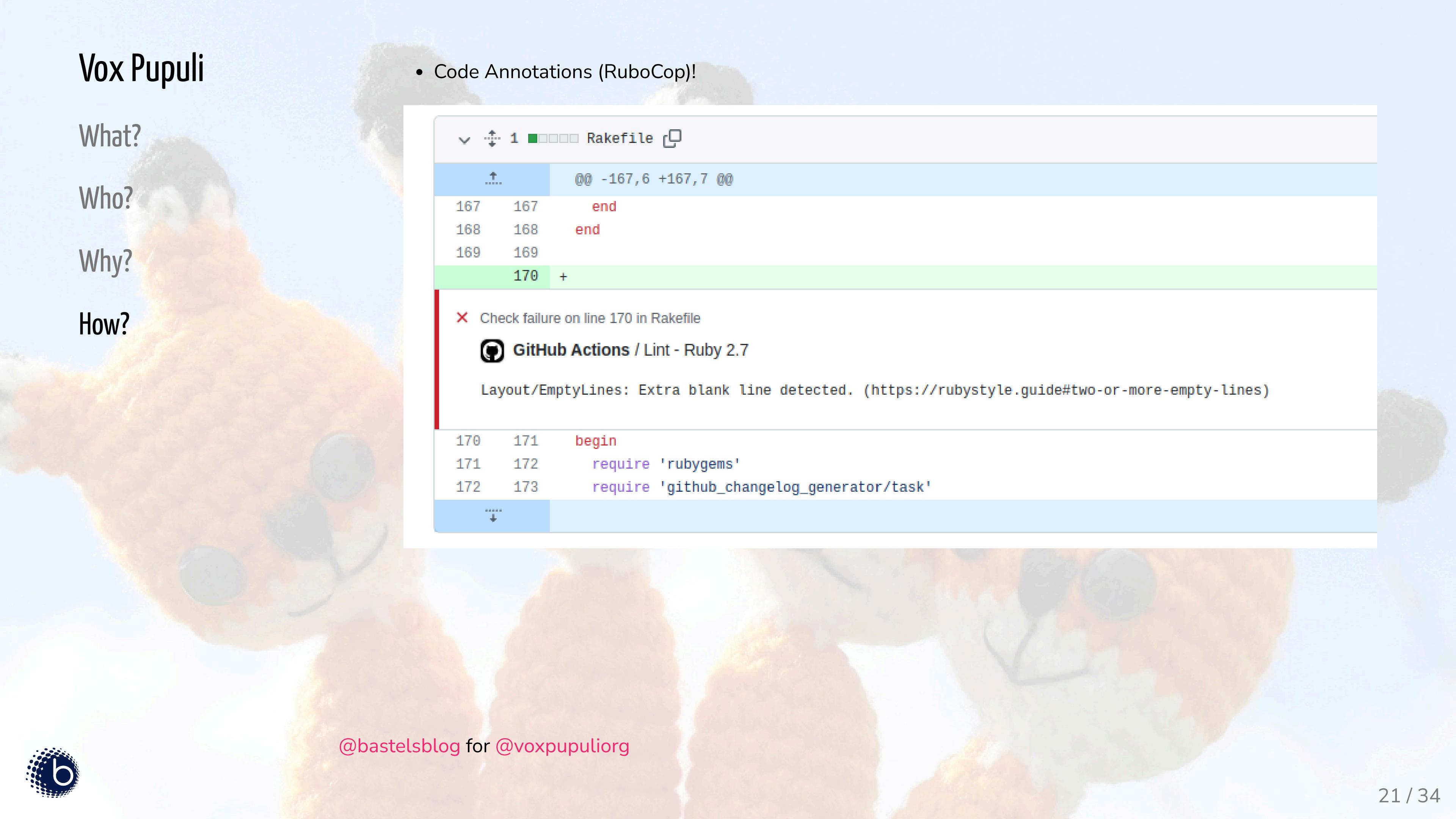
What?

Who?

Why?

How?

- Code Annotations (RuboCop)!



```
167 167 end
168 168 end
169 169
170 +
```

✗ 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>)

```
170 171 begin
171 172 require 'rubygems'
172 173 require 'github_changelog_generator/task'
```



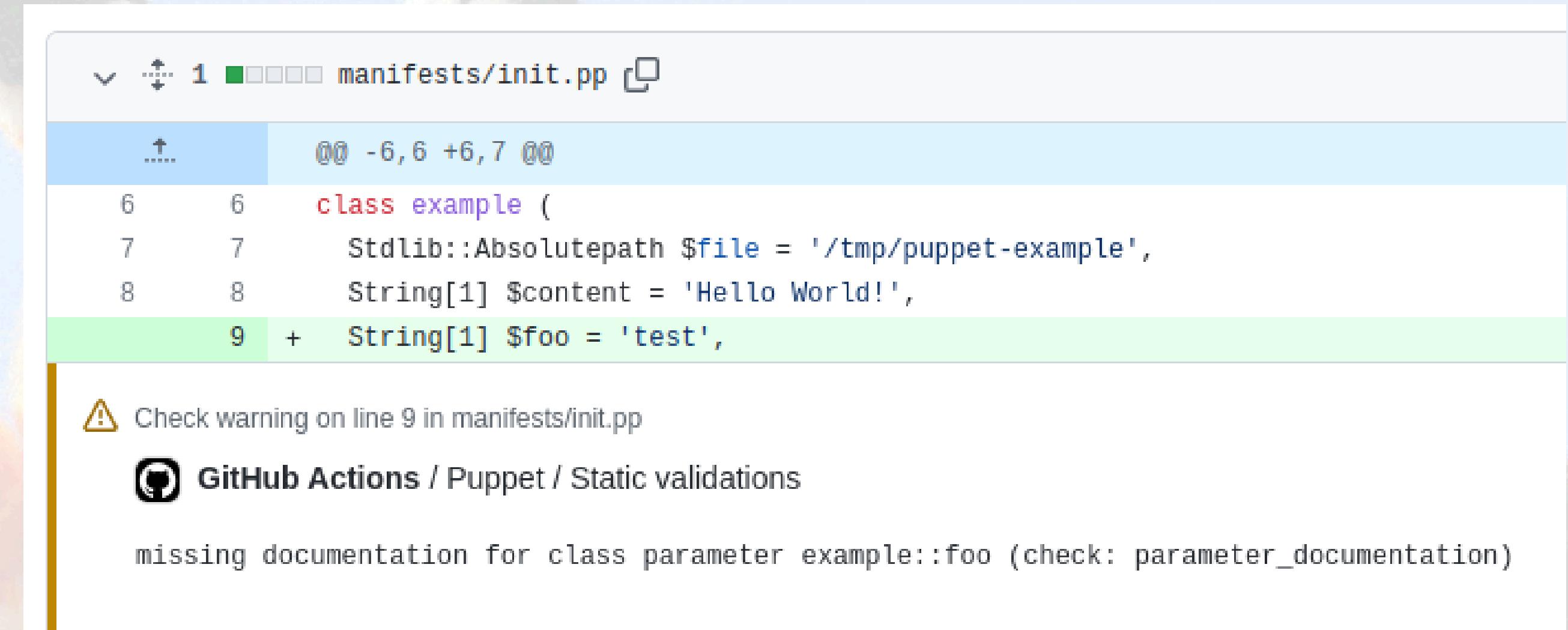
- Code Annotations (RuboCop, puppet-lint)!

What?

Who?

Why?

How?



The screenshot shows a code editor interface with a file named `manifests/init.pp`. The code is as follows:

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

A RuboCop annotation is shown at line 9, column 1, indicating a warning about missing documentation for the parameter `foo`:

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

⌚ GitHub Actions / Puppet / Static validations

missing documentation for class parameter example::foo (check: parameter_documentation)



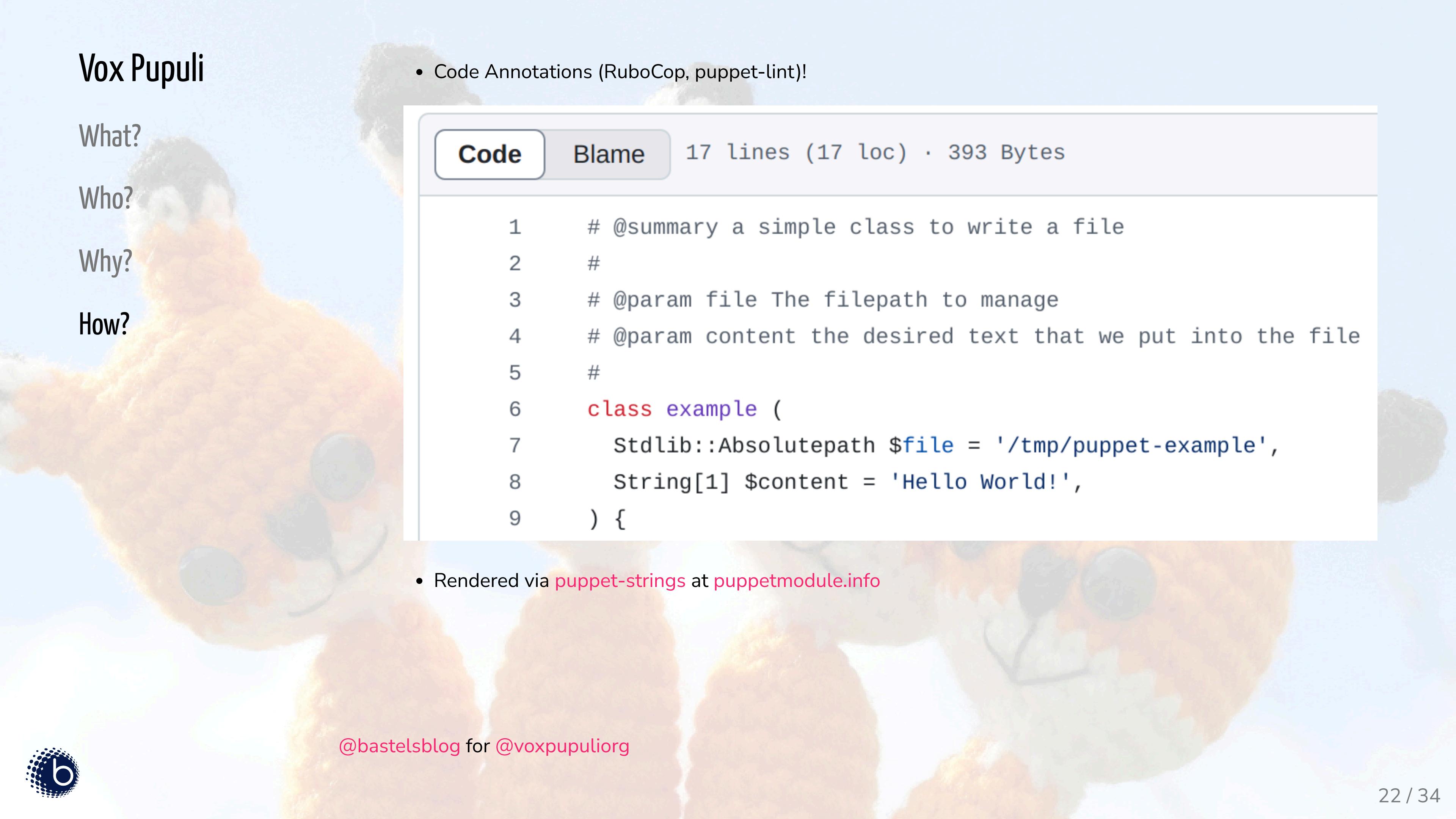
What?

Who?

Why?

How?

- Code Annotations (RuboCop, puppet-lint)!



Code Blame 17 lines (17 loc) · 393 Bytes

```
1  # @summary a simple class to write a file
2  #
3  # @param file The filepath to manage
4  # @param content the desired text that we put into the file
5  #
6  class example (
7      Stdlib::Absolutepath $file = '/tmp/puppet-example',
8      String[1] $content = 'Hello World!',
9  ) {
```

- Rendered via [puppet-strings](#) at [puppetmodule.info](#)



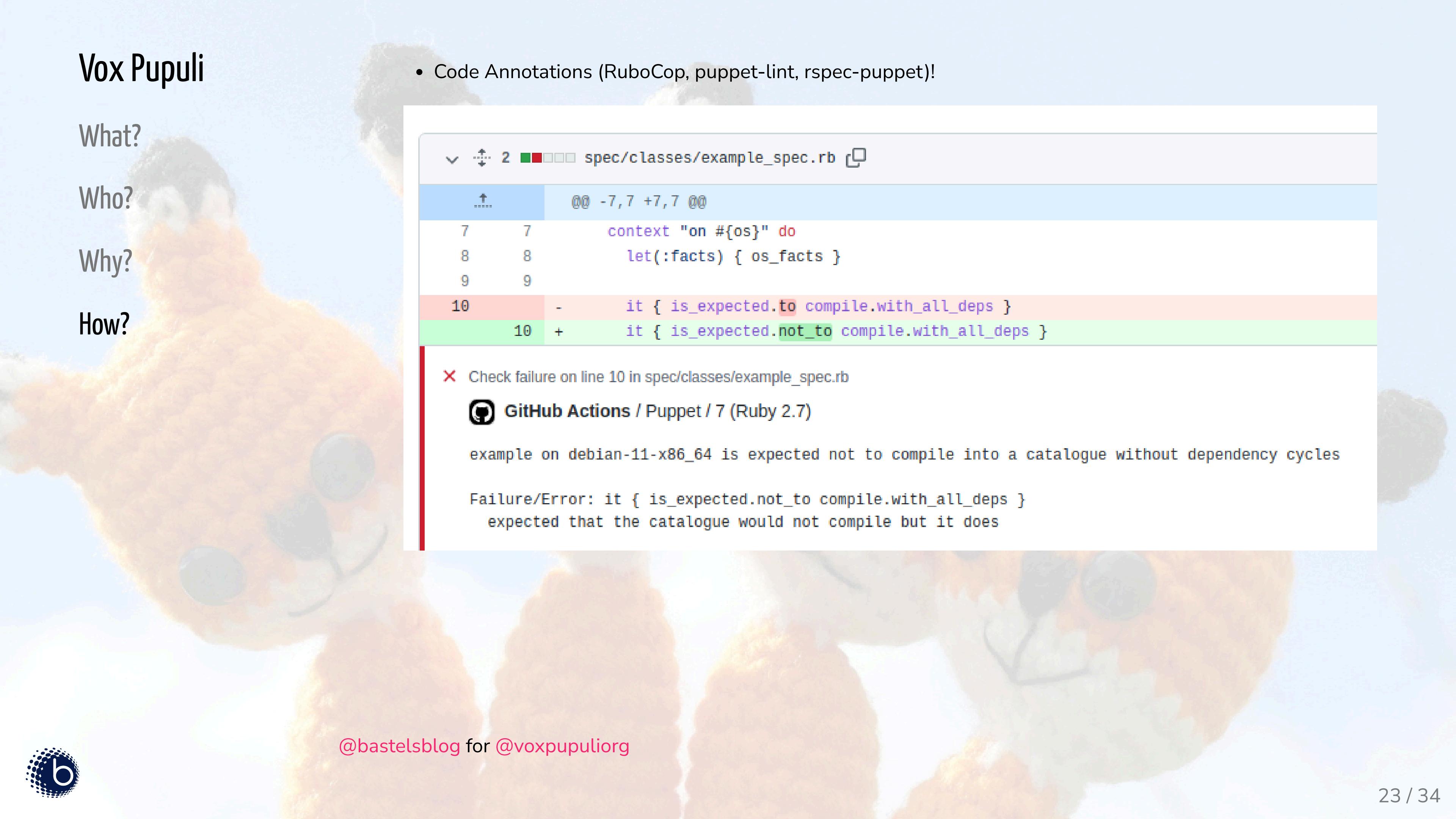
What?

Who?

Why?

How?

- 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
```



What?

Who?

Why?

How?

- Code Annotations (RuboCop, puppet-lint, rspec-puppet, Beaker)!

```
31  30      describe package('zabbix-server-pgsql') do
32  31          it { is_expected.to be_installed }
```

✗ Check failure on line 31 in spec/acceptance/server_spec.rb

 GitHub Actions / Puppet / Puppet 8 - OracleLinux 7 - Zabbix 6.0

zabbix::server class default parameters Package "zabbix-server-pgsql" is expected to be installed

Failure/Error: it { is_expected.to be_installed }
expected Package "zabbix-server-pgsql" to be installed



Vox Pupuli

What?

Who?

Why?

How?

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

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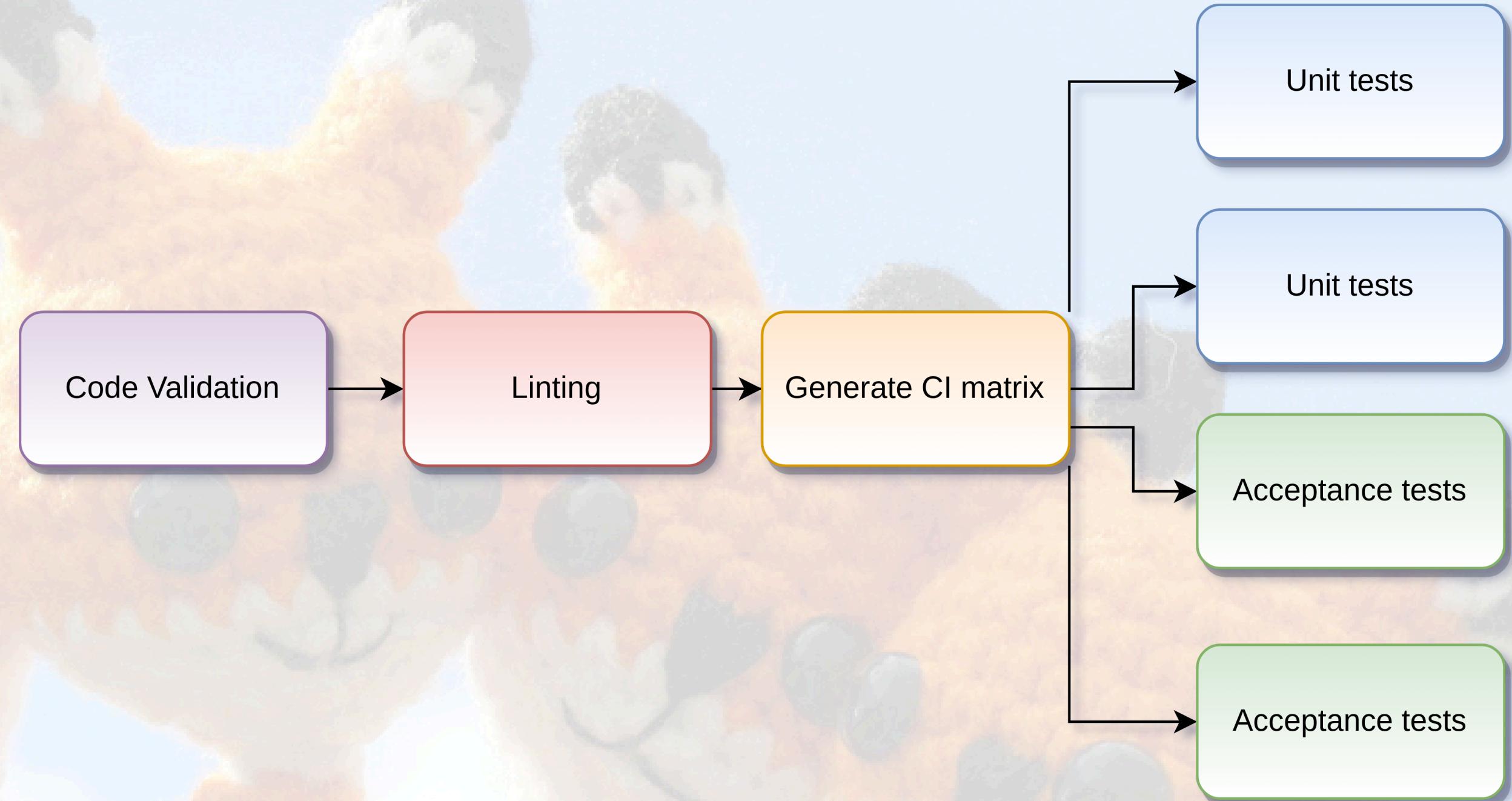
- CI Matrix Generator

What?

Who?

Why?

How?



Vox Pupuli

What?

Who?

Why?

How?

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

```
{  
  "name": "puppet",  
  "version_requirement": ">= 7.0.0 < 9.0.0"  
}
```



Vox Pupuli

What?

Who?

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How?

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

```
{  
  "name": "puppet",  
  "version_requirement": ">= 7.0.0 < 9.0.0"  
}
```

- jq .operatingsystem_support[0] metadata.json

```
{  
  "operatingsystem": "Debian",  
  "operatingsystemrelease": [  
    "11",  
    "12"  
  ]  
}
```



Vox Pupuli

What?

Who?

Why?

How?

- CI Matrix Generator
- Documentation: github.com/voxpupuli/gha-puppet

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Vox Pupuli

What?

Who?

Why?

How?

- CI Matrix Generator
- Documentation: github.com/voxpupuli/gha-puppet
- Reuseable GitHub Workflow

```
---
name: CI
on: pull_request
concurrency:
  group: ${{ github.ref_name }}
  cancel-in-progress: true
jobs:
  puppet:
    name: Puppet
    uses: voxupuli/gha-puppet/.github/workflows/beaker.yml@v3
```

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Vox Pupuli

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How?

- CI Matrix Generator
- Documentation: github.com/voxpupuli/gha-puppet
- Reuseable GitHub Workflow
- Everything can be run locally: voxpupuli.org/docs/how_to_run_tests

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- Everything can be run locally: voxpupuli.org/docs/how_to_run_tests
- Add a CONTRIBUTING.md to a module

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Vox Pupuli

What?

Who?

Why?

How?

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



Vox Pupuli

What?

Who?

Why?

How?

- Each project has some boilerplate stuff
 - Rakefile, directory structure, CONTRIBUTING.md
- modulesync was developed by Puppet, moved to Vox Pupuli
- It takes a config file + templates
 - Syncs it into every module git repository
- Source Code: github.com/voxpupuli/modulesync



Vox Pupuli

What?

Who?

Why?

How?

- Our config repo: github.com/voxpupuli/modulesync_config

| | | |
|--|---------------------|-----------------|
|  bastelfreak 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

Conclusion

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Conclusion

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

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Conclusion

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

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- Document your projects

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Conclusion

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

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Conclusion

- Document how your team works
- Try to develop publicly, even corporate code
- Document your style guide
- Document your projects
- Try to reduce boilerplate code
- Manage boilerplate code in a central place

Vox Pupuli

Conclusion

Contact

- IRC: [Libera.Chat/#voxpupuli](#)
- Mailinglist: voxpupuli@groups.io
- Feedback: tim@bastelfreak.de
- Slideset and more talks: github.com/bastelfreak/talks
- Support Vox Pupuli via [GitHub sponsors](#) or [OpenCollective](#)

Thanks for your attention!

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Vox Pupuli

Conclusion

Contact

Link Collection

- Website: voxpupuli.org/docs/
- CI Setup: github.com/voxpupuli/gha-puppet
- Unit Tests: github.com/voxpupuli/voxpupuli-test
- Acceptance Tests: github.com/voxpupuli/voxpupuli-acceptance
- Release Tooling: github.com/voxpupuli/voxpupuli-release
- modulesync_config: github.com/voxpupuli/modulesync_config

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