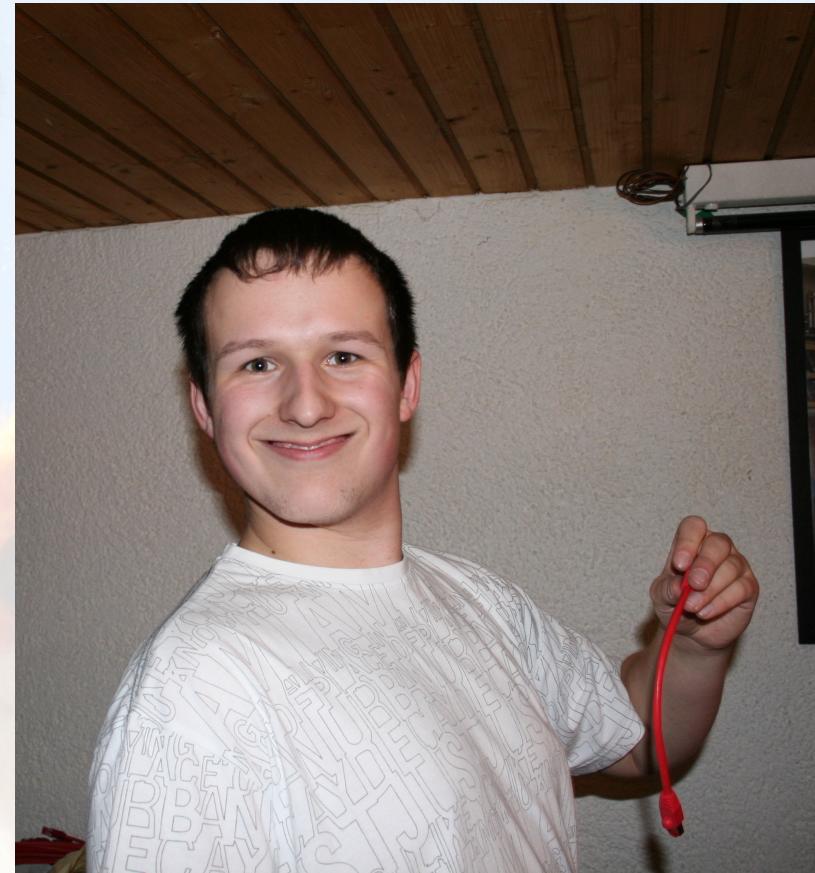


You thought scaling infra is hard, try scaling  
team contributions!

Covid-19 edition

# \$ whoami

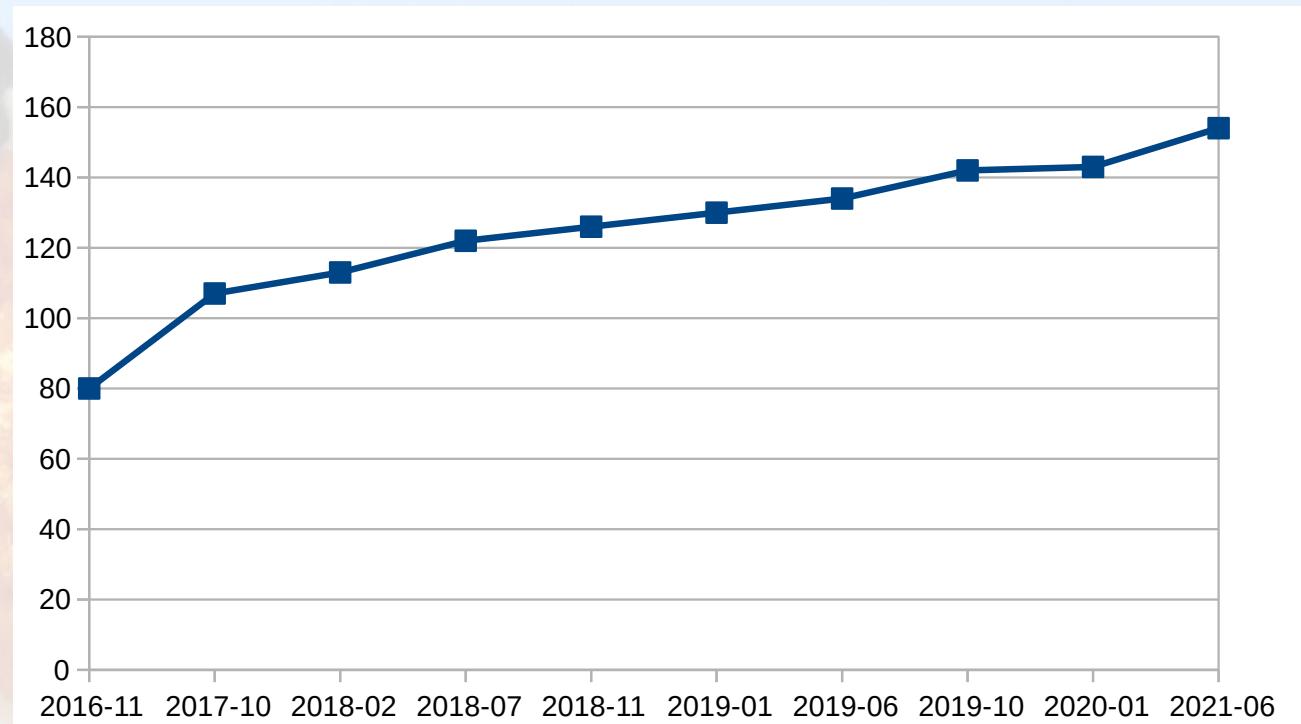
- Tim 'bastelfreak' Meusel
- Puppet Contributor since 2012
- Merging stuff on [Vox Pupuli](#) (Puppet Community) since 2015
- Vox Pupuli Project Management Committee member



What's this Vox Pupuli thingy?

# Vox Pupuli

- Amount of Vox Pupuli members with merge permissions



@bastelsblog for @voxpupuliorg

# The path of a Open Source Maintainer...

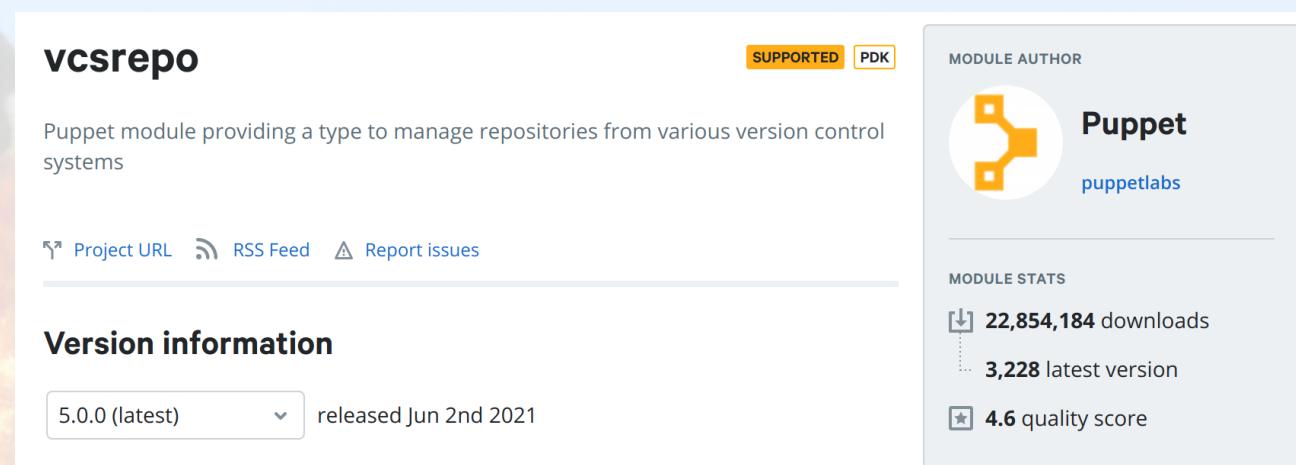
What do we do?



# Yak shaving

## Dependencies

- new major releases in modules



The screenshot shows the Puppet Forge module page for **vcsrepo**. The page has a "SUPPORTED" badge and a "PDK" badge. It describes the module as providing a type to manage repositories from various version control systems. Below the description are links to "Project URL", "RSS Feed", and "Report issues". A "Version information" section shows "5.0.0 (latest)" released on Jun 2nd 2021. To the right, the "MODULE AUTHOR" is listed as **Puppet** (`puppetlabs`) with a yellow icon. "MODULE STATS" show 22,854,184 downloads, the 3,228 latest version, and a 4.6 quality score.

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# Yak shaving

## Dependencies

- `metadata.json` in a puppet module

```
17    "dependencies": [
18      {
19        "name": "saz/ssh",
20        "version_requirement": ">= 4.0.0 < 7.0.0"
21      },
22      {
23        "name": "puppetlabs/vcsrepo",
24        "version_requirement": ">= 2.0.0 < 5.0.0"
25      },

```

# Yak shaving

## Dependencies

- new major Puppet release

```
59      "requirements": [
60        {
61          "name": "puppet",
62          "version_requirement": ">= 5.5.8 < 7.0.0"
63        }
64    ]
```

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# Yak shaving

## Dependencies

```
29     "operatingsystem": "RedHat",
30     "operatingsystemrelease": [
31         "6",
32         "7"
33     ]
34 }
```

# Yak shaving

Dependencies

Labels

19 labels

backwards-incompatible

beginner-friendly

bug

docs

duplicate

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# Yak shaving

Dependencies

Labels

Modulesync

- Many files are identical across our modules
  - CONTRIBUTING.md, rspec configuration
- Many files are very similar
  - .travis.yml, Gemfile, Rakefile

# Yak shaving

## Dependencies

## Labels

## Modulesync

- modulesync was initially developed by Puppet Inc.
- Now maintained by Vox Pupuli
- a template directory + configuration file for every module
- Take a look at modulesync: [github.com/voxpupuli/modulesync](https://github.com/voxpupuli/modulesync)
- The Vox Pupuli template repo:  
[github.com/voxpupuli/modulesync\\_config](https://github.com/voxpupuli/modulesync_config)

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# Yak shaving

Dependencies

Labels

Modulesync

Releases

Found 124 modules by Vox Pupuli

Filter by Puppet version:  Sort by:

 **prometheus**  
puppet

Approved

This module installs, configures and manages the Prometheus service.  
Version 8.2.1

Updated 4 days ago  
Total downloads 772,957  
Quality score 4.9 ?

 **nginx**  
puppet

Approved

Puppet NGINX management module  
Version 1.1.0

Updated 4 days ago  
Total downloads 47,012,744  
Quality score 4.2 ?

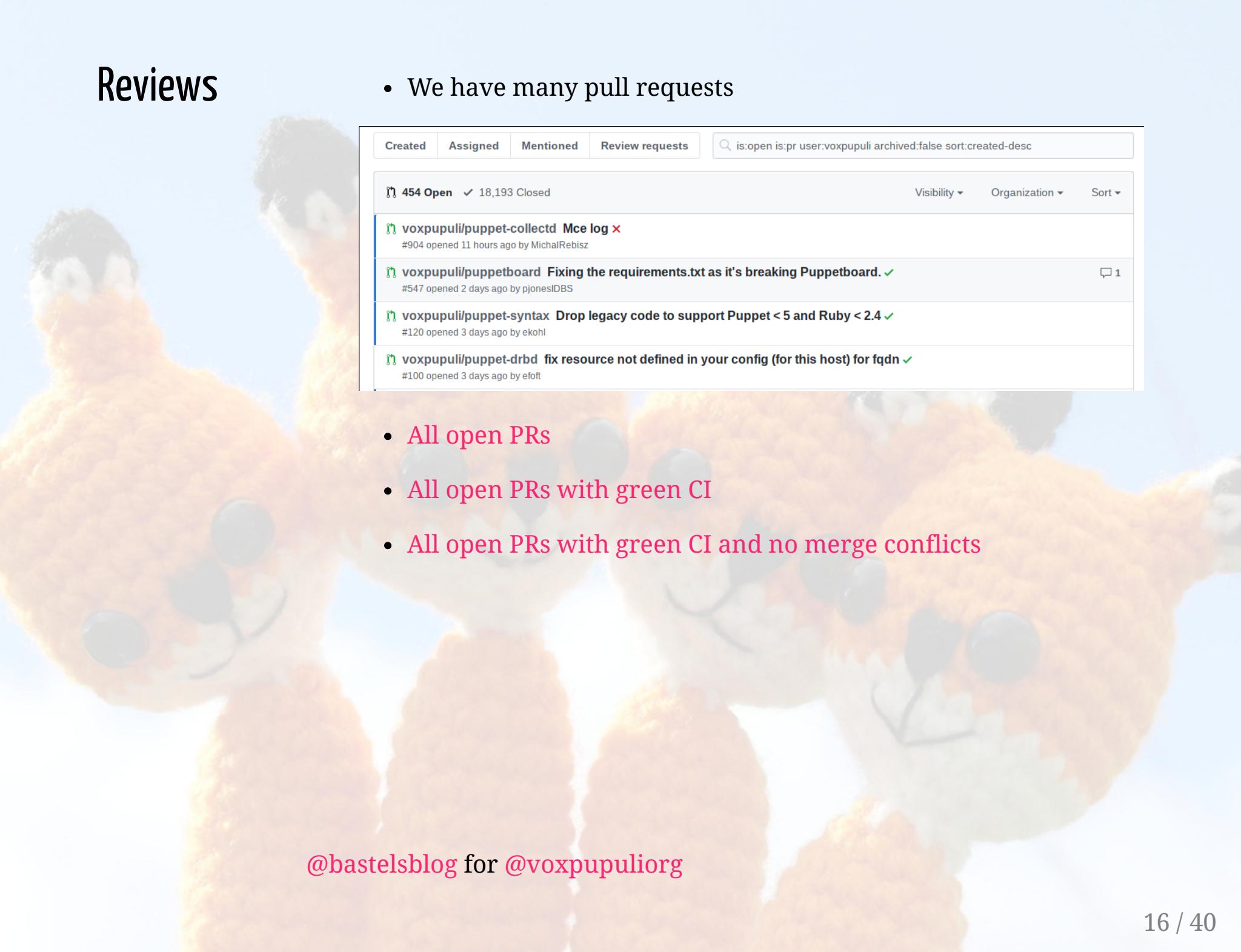
@bastelsblog for @voxpupuliorg

# The path of a Open Source Maintainer...

What do we actually do?

# Reviews

- We have many pull requests



A screenshot of a GitHub search results page for the organization 'voxpupuli'. The search bar at the top contains the query 'is:open is:pr user:voxpupuli archived:false sort:created-desc'. Below the search bar, there are tabs for 'Created', 'Assigned', 'Mentioned', and 'Review requests', with 'Review requests' being the active tab. The results show 454 open pull requests. The first four results are listed:

- voxpupuli/puppet-collectd** Mce log ✗  
#904 opened 11 hours ago by MichalRebisz
- voxpupuli/puppetboard** Fixing the requirements.txt as it's breaking Puppetboard. ✓  
#547 opened 2 days ago by pjonesIDBS
- voxpupuli/puppet-syntax** Drop legacy code to support Puppet < 5 and Ruby < 2.4 ✓  
#120 opened 3 days ago by ekohl
- voxpupuli/puppet-drbd** fix resource not defined in your config (for this host) for fqdn ✓  
#100 opened 3 days ago by efoft

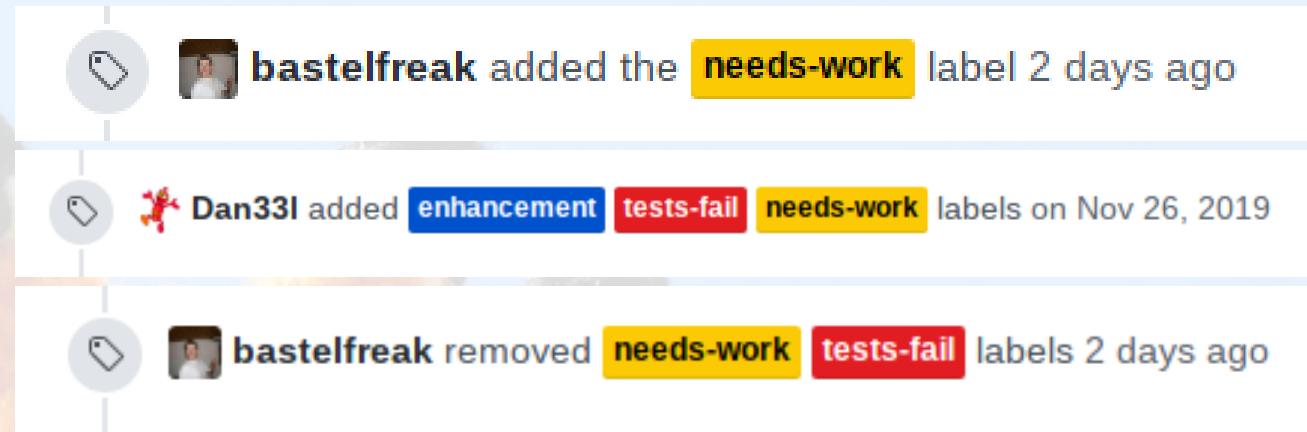
On the right side of the results, there are filters for 'Visibility', 'Organization', and 'Sort'.

- All open PRs
- All open PRs with green CI
- All open PRs with green CI and no merge conflicts

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# Reviews

## More labels



- New feature? **enhancement** label
- Bug / Bugfix? **bug** label
- Breaking change? **backwards-incompatible** label
- Additional work required? **needs-work** label

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# Reviews

## More labels

Filtering:

- labels like needs-feedback, needs-work, tests-fail, needs-docs, beginner-friendly, needs-rebase help us to sort pull requests and issues by grouping them

Changelog:

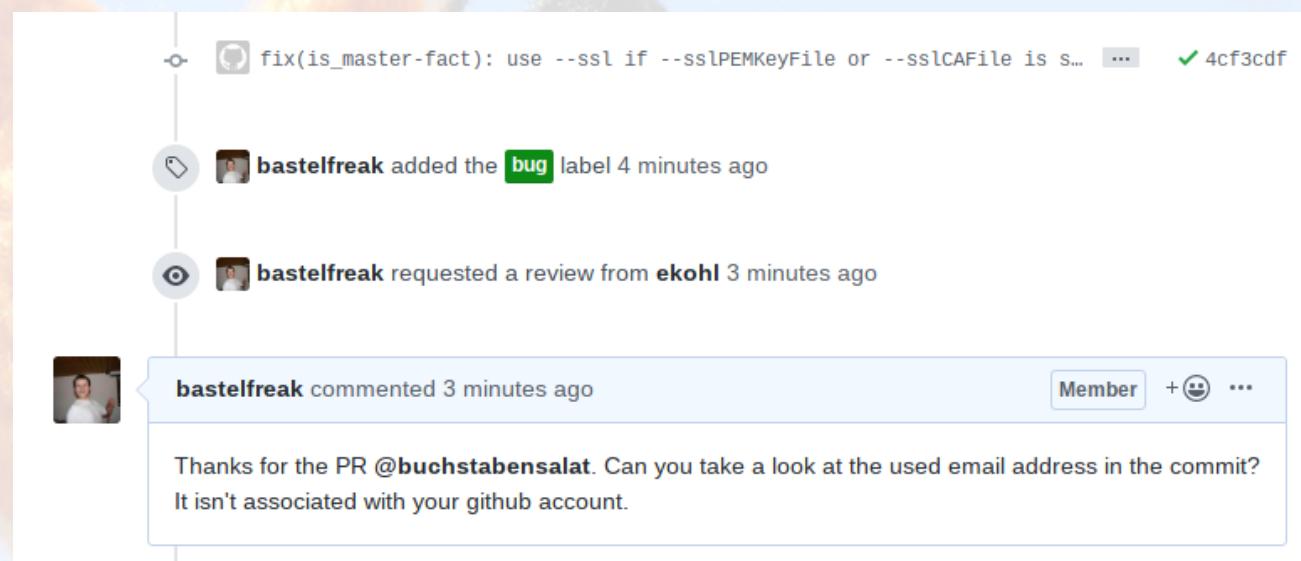
- labels like bug, enhancement, backwards-incompatible help us to generate a CHANGELOG.md

# Reviews

More labels

Email Addresses

- Ensure that an author has their email address in Git and github.com in sync
  - Otherwise GitHub fails to account the contribution properly



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# Reviews

More labels

Email Addresses

Templates

- Ensure that new templates are always **epp**, not **erb**
  - Epp templates have proper scopes and datatypes

The screenshot shows a review interface with a green header bar. The header bar contains the number '1' and the text '+ <Plugin mcelog>'. Below the header is a comment card. The comment is from a user named 'bastelfreak' (Member) posted 'now'. The message reads: 'can you please convert this to an epp template? We require this for new templates. For our other review guidelines please have a look at [https://voxpupuli.org/docs/reviewing\\_pr/](https://voxpupuli.org/docs/reviewing_pr/)'. Below the message is a 'Reply...' input field and a 'Resolve conversation' button.

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Let us solve all our problems!

VPT

# AUTOMATE



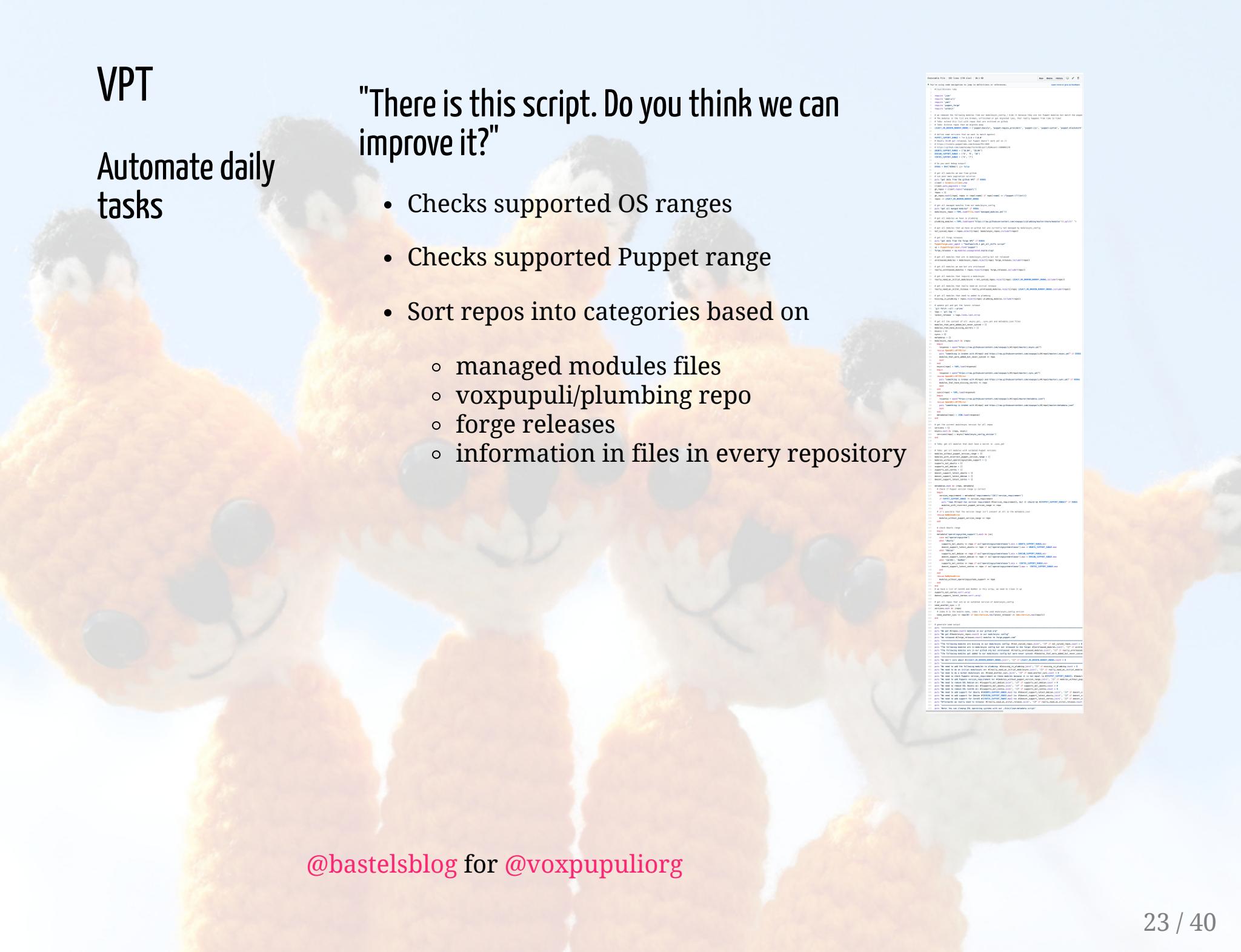
@bastelsblog for @voxpupuliorg

# VPT

## Automate daily tasks

### "There is this script. Do you think we can improve it?"

- Checks supported OS ranges
- Checks supported Puppet range
- Sort repos into categories based on
  - managed modules files
  - voxpupuli/plumbing repo
  - forge releases
  - information in files in every repository



```
#!/usr/bin/python
# This file is part of the VPT project.
# Copyright (C) 2013-2014 by the VPT team.
#
# This program is free software: you can redistribute it and/or modify
# it under the terms of the GNU General Public License as published by
# the Free Software Foundation, either version 3 of the License, or
# (at your option) any later version.
#
# This program is distributed in the hope that it will be useful,
# but WITHOUT ANY WARRANTY; without even the implied warranty of
# MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
# GNU General Public License for more details.
#
# You should have received a copy of the GNU General Public License
# along with this program. If not, see <http://www.gnu.org/licenses/>.
```

The code block contains a complex Python script with numerous comments and imports, including requests, json, os, re, and time modules. It performs various checks on repositories, such as verifying headers, checking for specific files like 'README.md' and 'MANIFEST.in', and comparing file sizes. It also handles GitHub API calls and manages local file operations like reading from 'modules.txt' and writing to 'output.json'.

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VPT

# Automate daily tasks

"There is this script. Do you think we can improve it?"

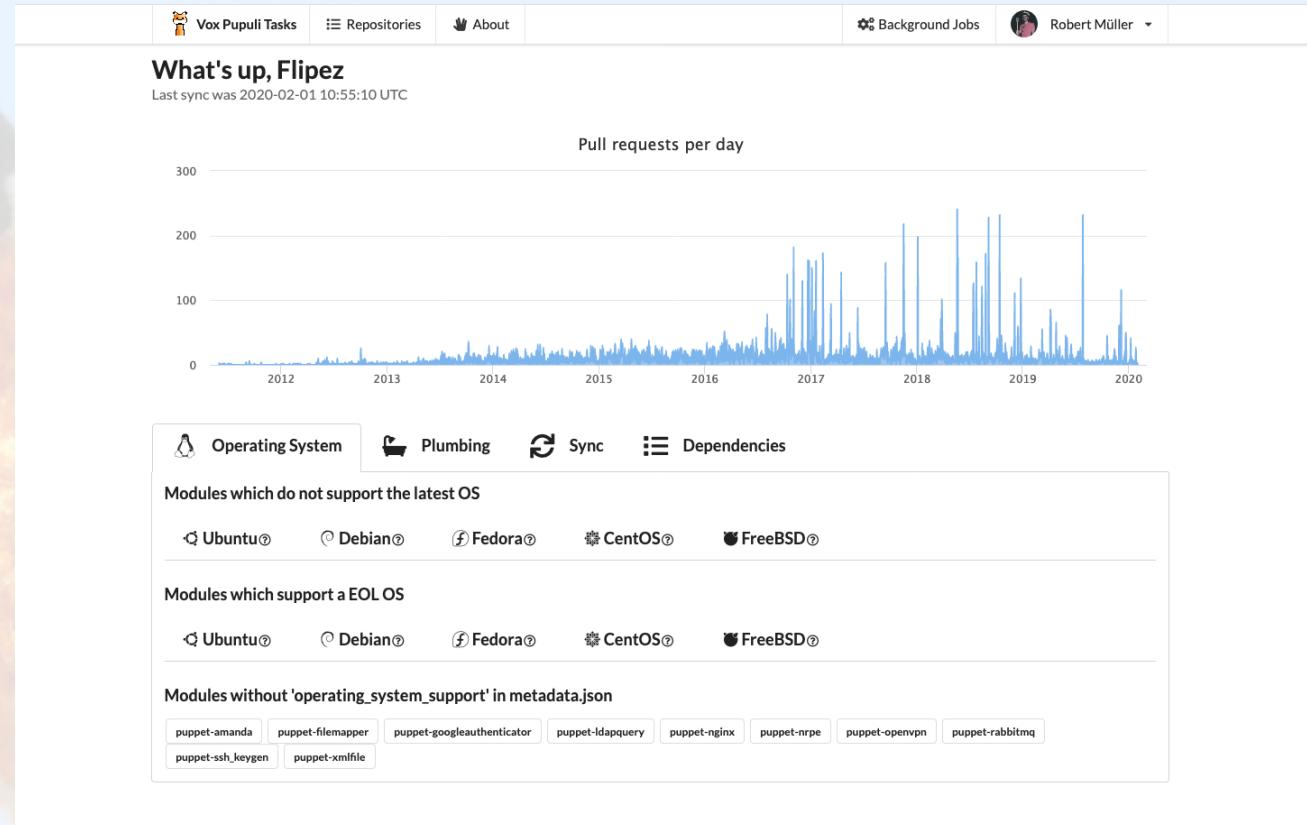
- Checks supported OS ranges
  - Checks supported Puppet range
  - Sort repos into categories based on
    - managed modules files
    - voxpupuli/plumbing repo
    - forge releases
    - information in files in every repository

Uhm, I guess

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# VPT

## Automate daily tasks

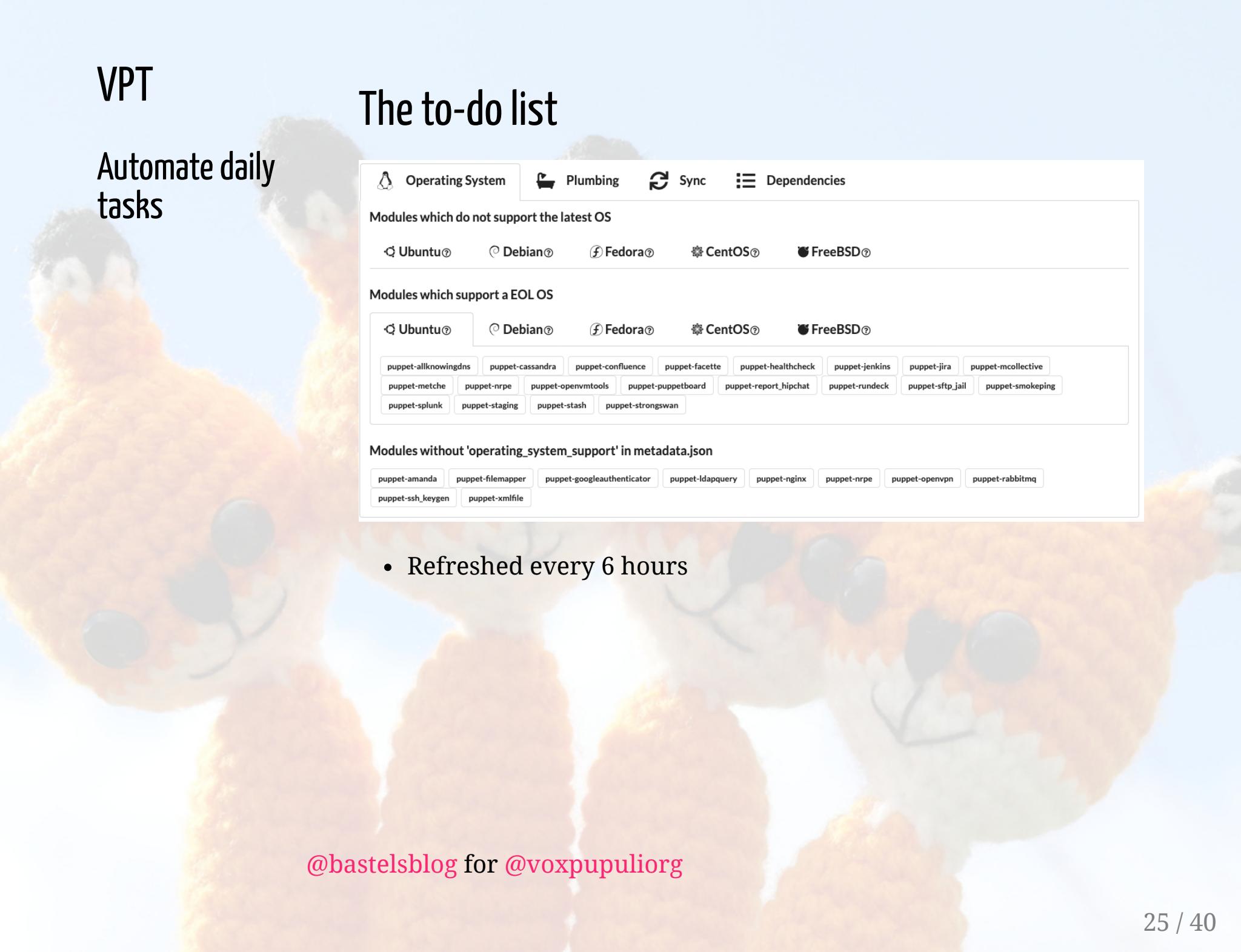


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VPT

# Automate daily tasks

## The to-do list



The screenshot shows a web-based interface for managing Puppet modules. At the top, there are tabs for 'Operating System', 'Plumbing', 'Sync', and 'Dependencies'. Below these are sections for 'Modules which do not support the latest OS' and 'Modules which support a EOL OS'. Each section has tabs for 'Ubuntu', 'Debian', 'Fedora', 'CentOS', and 'FreeBSD'. Under the 'EOL OS' section, there is a grid of module names. The final section is 'Modules without 'operating\_system\_support' in metadata.json', also with tabs for the five operating systems and a grid of module names.

Operating System Plumbing Sync Dependencies

Modules which do not support the latest OS

Ubuntu Debian Fedora CentOS FreeBSD

Modules which support a EOL OS

Ubuntu Debian Fedora CentOS FreeBSD

puppet-allknowingdns	puppet-cassandra	puppet-confluence	puppet-facette	puppet-healthcheck	puppet-jenkins	puppet-jira	puppet-mcollective
puppet-metche	puppet-nrpe	puppet-openvmtools	puppet-puppetboard	puppet-report_hipchat	puppet-rundeck	puppet-sftp_jail	puppet-smokeping
puppet-splunk	puppet-staging	puppet-stash	puppet-strongswan				

Modules without 'operating\_system\_support' in metadata.json

Ubuntu Debian Fedora CentOS FreeBSD

puppet-amanda	puppet-filemaker	puppet-googleauthenticator	puppet-ldapquery	puppet-nginx	puppet-nrpe	puppet-openvpn	puppet-rabbitmq
puppet-ssh_keygen	puppet-xmlfile						

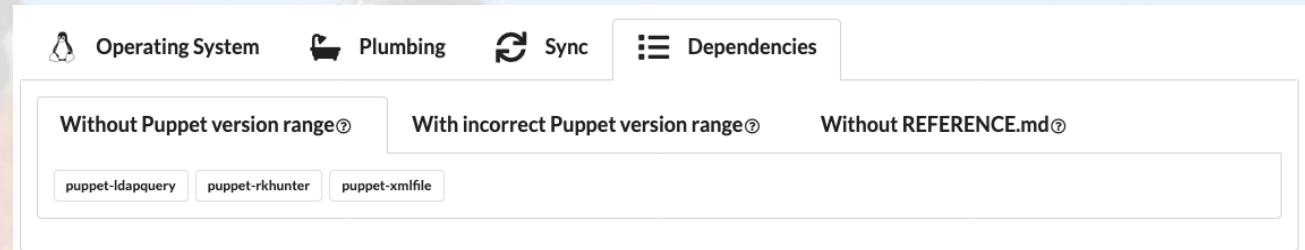
- Refreshed every 6 hours

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VPT

Automate daily  
tasks

# The to-do list



- Refreshed every 6 hours

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VPT

Automate daily  
tasks

# The repository view

A screenshot of a web interface titled "Vox Pupuli Tasks". The main navigation bar includes links for "Vox Pupuli Tasks", "Repositories", "About", "Background Jobs", and a user profile for "Robert Müller". The current page is for the repository "puppet-alternatives", which is described as "Manage Debian alternatives links". The repository has 23 stars, 23 forks, 3 issues, and three warning badges: "Missing REFERENCE.md", "Does not support latest CentOS", and "Need another sync". A "GitHub" button is also present. Below the repository title, there is a section for "Open Pull Requests" with one entry: "renamed providers to fit current status of alternative usage in distributions / Add SLES12/15 support" (enhancement, merge conflicts).

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What else did we do?

*How to actually learn any new programming concept*



*Essential*

Changing Stuff and  
Seeing What Happens

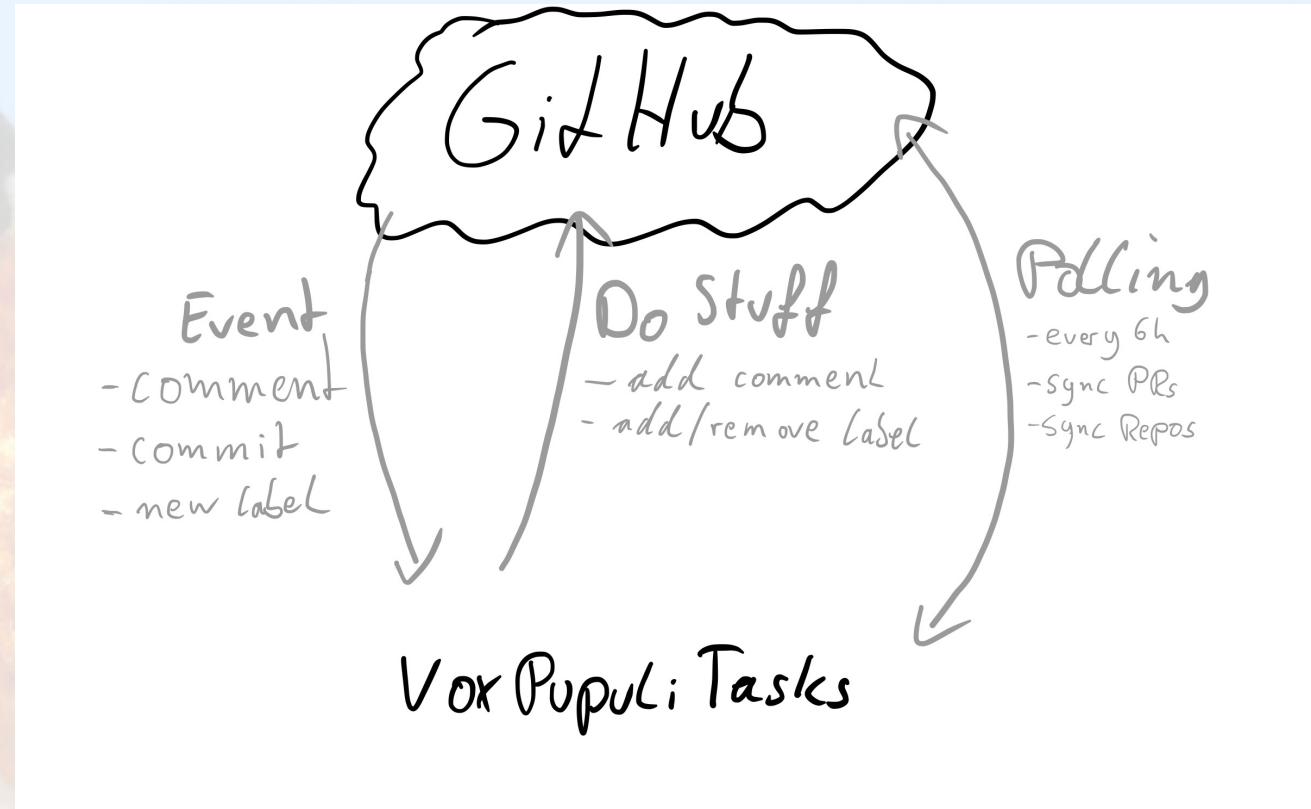
O RLY?

@ThePracticalDev

# VPT

Automate daily  
tasks

Architecture



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# VPT

## Automate daily tasks

## Architecture

```
case type
when 'pull_request'
  # Ignore events which are triggered by the bot
  return if payload.dig('sender', 'id').to_i == 53_702_691

  if Repository.notably? payload['repository']['name']
    @processor = GithubEvent::PullRequest.new(payload)
  end
when *known_but_ignoreable_events
  true
else
  Raven.capture_message("Unknown Hook Received: #{type}", extra: payload)
end
```

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# VPT

## Automate daily tasks

## Architecture

```
def validate(saved_changes)
  # Don't run through the validateen, if only the eligible_for_comment attribu
  return if saved_changes.keys.sort == %w[eligible_for_comment].sort && !merg

  # if the pull request is now closed, dont attach/remove labels/comments
  return if closed?

  label = Label.needs_rebase
  if mergeable == true
    ensure_label_is_detached(label)
  elsif mergeable == false
    repository.ensure_label_exists(label)

  ##
  # We only add a comment if we added a label. If the label already is pre
  # we also already added the comment. So no need for a new one.
  add_comment(I18n.t('c.needs_rebase', author: author)) if ensure_label_is_
  elsif mergeable.nil?
    UpdateMergeableWorker.perform_in(1.minute.from_now,
      repository.name,
      number,
      id,
      saved_changes)

  end
end
```

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VPT

Automate daily tasks

Architecture

voxpupuli / puppet-caddy

Watch ▾

Code Issues Pull requests Actions Wiki Security Insights

## Ubuntu 18.04 support #18

**Open** HogeBlekker wants to merge 12 commits into `voxpupuli:master` from `HogeBlekker:master`

Conversation 16 Commits 12 Checks 1 Files changed 18

HogeBlekker commented on 1 Jul 2019 First-time contributor + ...

**Pull Request (PR) description**

This pull request includes codes that makes this module support:

- Ubuntu 18.04 with
- Systemd v234, which allows [setting permissions](#) for binding to low ports in the `.service` file.

**This Pull Request (PR) fixes the following issues**

n/a

HogeBlekker and others added 10 commits on 27 Jun 2019

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# VPT

Automate daily tasks

Architecture

Add more commits by pushing to the **master** branch on [HogeBlekker/puppet-caddy](#).

 **All checks have passed**  
2 successful checks [Show all checks](#)

 **This branch has conflicts that must be resolved**  
Use the [web editor](#) or the [command line](#) to resolve conflicts. [Resolve conflicts](#)

**Conflicting files**

- .fixtures.yml
- manifests/config.pp
- manifests/params.pp
- metadata.json
- spec/classes/config\_spec.rb
- spec/classes/package\_spec.rb
- spec/defines/vhost\_spec.rb

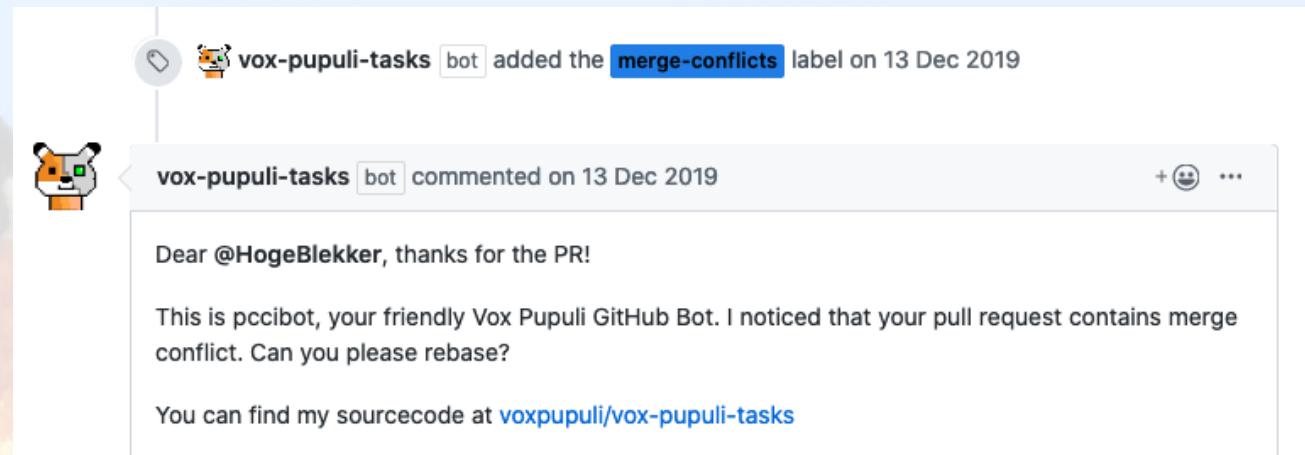
[Merge pull request](#) ▾ You can also [open this in GitHub Desktop](#) or view [command line instructions](#).

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# VPT

## Automate daily tasks

## Architecture

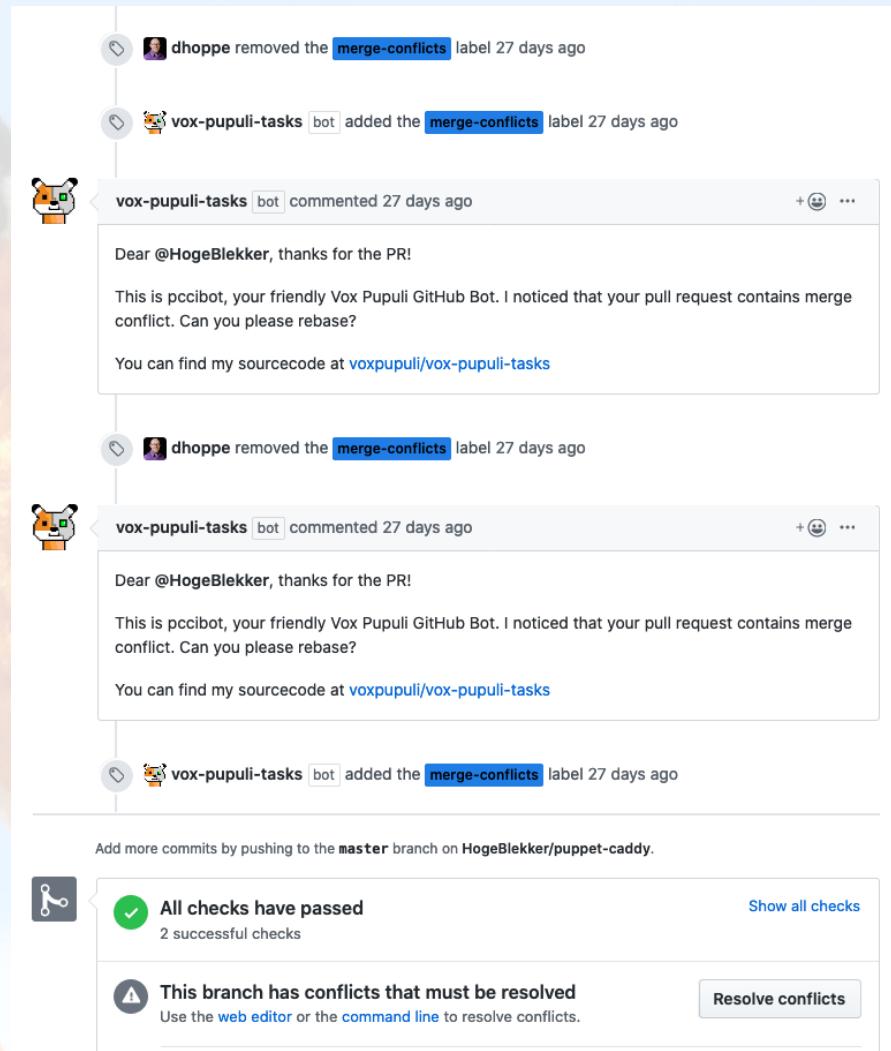


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# VPT

## Automate daily tasks

## Architecture

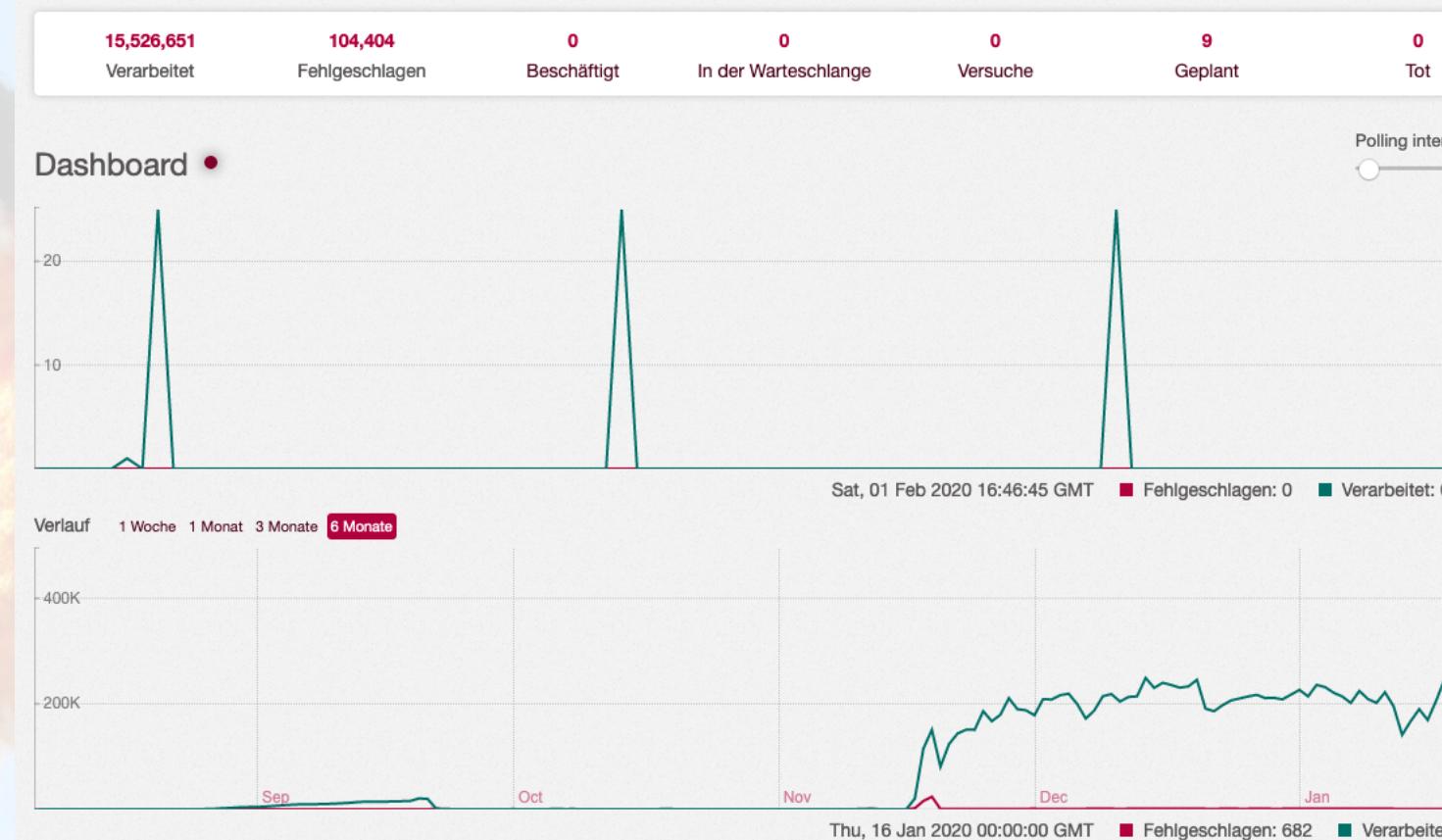


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# VPT

Automate daily  
tasks

Architecture



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# What else can we do?

What do you want us to do? What are your usecases?

VPT

- Automate more labeling on issues and pull requests

Automate daily  
tasks

Architecture

Lookout

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VPT

Automate daily  
tasks

Architecture

Lookout

- Automate more labeling on issues and pull requests
- Implement GitLab API support

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# VPT

Automate daily tasks

Architecture

Lookout

- Automate more labeling on issues and pull requests
- Implement GitLab API support
- Help companies that want to host this on premise for internal repositories

# VPT

Automate daily tasks

Architecture

Lookout

Conclusion

- Vox Pupuli is awesome, please contribute!
- We've great tooling to scale module handling
- GitHub/GitLab API enables us to automate even more and to focus on code reviewing
- Let us know which parts in the communities you would like to see automated
- Checkout the current dashboard at [voxpupu.li](http://voxpupu.li) or our docs at [github.com/voxpupuli/vox-pupuli-tasks](https://github.com/voxpupuli/vox-pupuli-tasks)

Thanks for your attention!

@bastelsblog for @voxpupuliorg