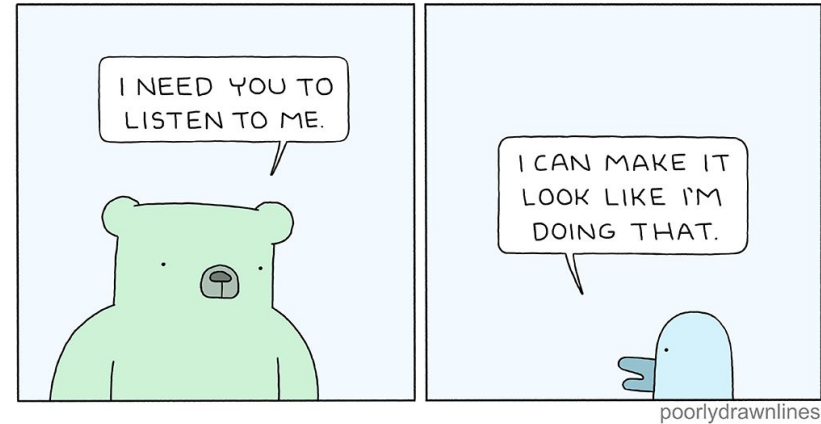


# Testing Puppet Code with VoxBox

rwaffen @betadots

- Who am I?
- How to test at all?
- What's the problem with testing?
- How can VoxBox help me?
- Demo Time!



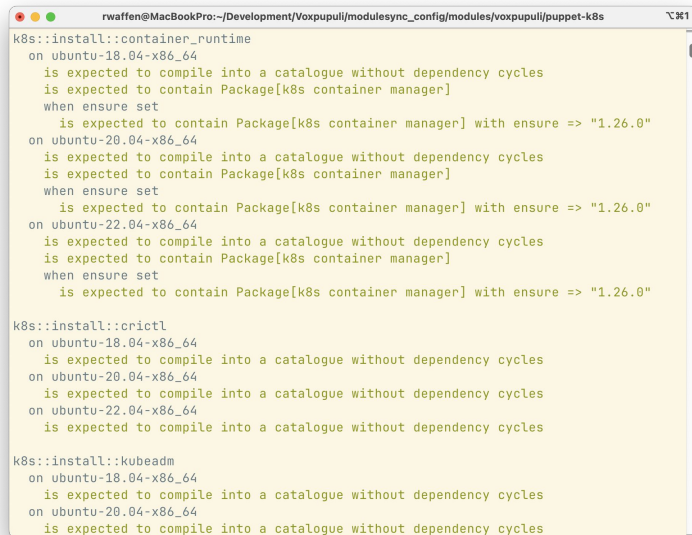
# Who am I?

- Doing Linux since 2000 (Suse 6.4, with the thick book)
- Doing Puppet since 2011 (2.7.x)
- Working at betadots GmbH
- Doing container things for Vox Pupuli
- Likes gaming on Linux
- German (Sorry For Writing In Caps)



Vox Pupuli: [https://voxpupuli.org/docs/how\\_to\\_run\\_tests/](https://voxpupuli.org/docs/how_to_run_tests/)

- Most modules have unit tests (spec)
- You change code, you run the tests
- Lazy: Run 'em on the Github CI
- Pro: Run 'em locally
  - Faster feedback cycles



```
rwaffen@MacBookPro: ~/Development/Voxpupuli/modulesync_config/modules/voxpupuli/puppet-k8s
k8s::install::container_runtime
  on ubuntu-18.04-x86_64
    is expected to compile into a catalogue without dependency cycles
    is expected to contain Package[k8s container manager]
    when ensure set
      is expected to contain Package[k8s container manager] with ensure => "1.26.0"
  on ubuntu-20.04-x86_64
    is expected to compile into a catalogue without dependency cycles
    is expected to contain Package[k8s container manager]
    when ensure set
      is expected to contain Package[k8s container manager] with ensure => "1.26.0"
  on ubuntu-22.04-x86_64
    is expected to compile into a catalogue without dependency cycles
    is expected to contain Package[k8s container manager]
    when ensure set
      is expected to contain Package[k8s container manager] with ensure => "1.26.0"
k8s::install::orictl
  on ubuntu-18.04-x86_64
    is expected to compile into a catalogue without dependency cycles
  on ubuntu-20.04-x86_64
    is expected to compile into a catalogue without dependency cycles
  on ubuntu-22.04-x86_64
    is expected to compile into a catalogue without dependency cycles
k8s::install::kubeadm
  on ubuntu-18.04-x86_64
    is expected to compile into a catalogue without dependency cycles
  on ubuntu-20.04-x86_64
    is expected to compile into a catalogue without dependency cycles
```

# What's the problem with testing?

Doing something like this:

- `cd into/project`
- `bundle install`
- `bundle .... STOP` how does this bundle thing work?

You need a working Ruby installation. Best the one compatible with the puppet version you wanna test.

Try to use system ruby, freak out... Try rbenv, freak out... Try rvm, freak out...

Try to install gems, today working, tomorrow breaking cause upstream doesn't like you(r gem environment) anymore



# How can VoxBox help me?

- Unified testing environment
- Ruby included
- All needed Gems included
- "Frozen" environment
  - No sudden breaking gem dependencies
- Need only container runtime
- Mount the module dir
- Just run the tests



<https://github.com/voxpupuli/container-voxbox>

```
podman pull ghcr.io/voxpupuli/voxbox:8
```

# How can VoxBox help me?

- Has many other rake tasks
  - Linting
  - r10k checking
- CI friendly
- Has tools like
  - jq
  - yamllint
- Prebuild for OpenVox/Puppet 8
  - Older 7 images for legacy
- Alpine based images







# Demo Time!

podman images

podman pull [ghcr.io/voxpupuli/voxbox:8](https://ghcr.io/voxpupuli/voxbox:8)

grype ghcr.io/voxpupuli/voxbox:8

cd Development/Voxpupuli/Modules/puppet-sssd

podman run -it --rm -v \$PWD:/repo:Z ghcr.io/voxpupuli/voxbox:8 -f /Rakefile -T

podman run -it --rm -v \$PWD:/repo:Z ghcr.io/voxpupuli/voxbox:8 -f /Rakefile spec

podman run -it --rm -v \$PWD:/repo:Z ghcr.io/voxpupuli/voxbox:8 -f /Rakefile rubocop

podman run -it --rm -v \$PWD:/repo:Z --entrypoint ash [ghcr.io/voxpupuli/voxbox:8](https://ghcr.io/voxpupuli/voxbox:8)

# yamllint .

# jq . metadata.json

```
cd Development/Betadots/workshop-control-repo
```

```
podman run -it --rm -v $PWD:/repo:Z ghcr.io/voxpupuli/voxbox:8 -f /Rakefile r10k:dependencies
```

```
cd site/infrastructure
```

```
podman run -it --rm -v $PWD:/repo:Z ghcr.io/voxpupuli/voxbox:8 -f /Rakefile  
voxpupuli:custom:lint_all
```

```
rwaffen@MacBookPro:~/Development/Voxpupuli/modulesync_config/modules/voxpupuli/puppet-sssd 1
→ puppet-sssd git:(main) grype ghcr.io/voxpupuli/voxbbox:8
✓ Loaded image ghcr.io/voxpupuli/voxbbox:8
✓ Parsed image sha256:8518b43cfc68300a8681d73103886654dbffb09b614cc
✓ Cataloged contents 719040fbc44a6d3339c72515448eccfba32adb732ebdf2e3787c
├── ✓ Packages [343 packages]
├── ✓ File digests [3,065 files]
├── ✓ File metadata [3,065 locations]
├── ✓ Executables [286 executables]
✓ Scanned for vulnerabilities [6 vulnerability matches]
├── by severity: 0 critical, 0 high, 0 medium, 2 low, 0 negligible (4 unknown)
├── by status: 6 fixed, 0 not-fixed, 0 ignored
NAME          INSTALLED  FIXED-IN  TYPE  VULNERABILITY  SEVERITY
curl           8.11.0-r2  8.11.1-r0  apk   CVE-2024-11053  Low
git            2.45.2-r0  2.45.3-r0  apk   CVE-2024-52006  Unknown
git            2.45.2-r0  2.45.3-r0  apk   CVE-2024-50349  Unknown
git-init-template 2.45.2-r0  2.45.3-r0  apk   CVE-2024-52006  Unknown
git-init-template 2.45.2-r0  2.45.3-r0  apk   CVE-2024-50349  Unknown
libcurl        8.11.0-r2  8.11.1-r0  apk   CVE-2024-11053  Low
→ puppet-sssd git:(main) █
```

```
rwaffen@MacBookPro:~/Development/Voxpupuli/modulesync_config/modules/voxpupuli/puppet-sssd 1
→ puppet-sssd git:(main) podman pull ghcr.io/voxpupuli/voxbox:8
Trying to pull ghcr.io/voxpupuli/voxbox:8...
Getting image source signatures
Copying blob sha256:dbfe2d6febfb015cb12f945040686bf9296ce121148d20e9418a027b3ba3d81b
Copying blob sha256:79810d6b1dd426f9b344ea48580c130cffee420e2a54469effac9c8a83319af9
Copying blob sha256:cf04c63912e16506c4413937c7f4579018e4bb25c272d989789cfba77b12f951
Copying blob sha256:19d44098a898070f1b1a71ef03e97b592773e67a9cd7f5adf6b40afe3f14feed
Copying blob sha256:57a01e81a3971e892954da181ff54aa648711d9c768bedf6741eab3e023df1c6
Copying blob sha256:fba5ae5d51e00f6320d94d6c3f25dda438e41814d13bc9d043d8a32e1ca48b02
Copying blob sha256:9b66359f3a9fb80c2b393641d283fc163866826d357a1047e63c133560751064
Copying blob sha256:0ce431fbfada8bc50ec3c27c8e027a00837343c81ce33078e9c1ba102ab94508
Copying blob sha256:938cb5299ea422caf131c2cb881abb06fb30f88fd73e4c5b5b55e4d43aa72509
Copying blob sha256:e4f61a7e6aaa20f27712507762a46d05d525706d7e7fe7eee5c0b1c3a58338a2
Copying blob sha256:cd98c028c2ea87ee4538077cc34a75b8fe40e03cf18c6e3656fb42dac97fb377
Copying config sha256:8518b43cfc68300a8681d73103886654dbffb09b614cc00f24524e7af2529066
Writing manifest to image destination
8518b43cfc68300a8681d73103886654dbffb09b614cc00f24524e7af2529066
→ puppet-sssd git:(main) █
```

```
rwaffen@MacBookPro: ~/Development/Voxpupuli/modulesync_config/modules/voxpupuli/puppet-sssd 1
→ puppet-sssd git:(main) podman images

REPOSITORY          TAG          IMAGE ID      CREATED      SIZE
ghcr.io/voxpupuli/voxbbox 7            2e1a1fe08676 5 weeks ago  236 MB
ghcr.io/voxpupuli/voxbbox 8            8518b43cfc68 5 weeks ago  274 MB
docker.io/library/ruby    3.2.5-alpine3.20 971a985f3cfd 5 months ago  89 MB
→ puppet-sssd git:(main)
```

```
rwaffen@MacBookPro:~/Development/Voxpupuli/modulesync_config/modules/voxpupuli/puppet-sssd  🔍 #1

ontent =~ /^\[pam\]$/
  with a forced filename
    is expected to contain File[/tmp/thing.conf] with ensure => "file", owner => "root"
, group => "root", mode => "0600", notify => "Class[Sssd::Service]", content =~ /^\[sssd\]
]$/, content =~ /^domains=c, a, b$/, content =~ /^services=pam, nss$/ and content =~ /^\[
pam\]$/

Code coverage
  must cover at least 0% of resources

Coverage Report:

Total resources:  26
Touched resources: 21
Resource coverage: 80.77%

Untouched resources:
  File[/etc/sssd/conf.d/30-sssd.conf]
  File[/etc/sssd/conf.d/50-nss.conf]
  File[/etc/sssd/conf.d/50-sssd.conf]
  File[/etc/sssd/sssd.conf]
  File[/tmp/test.conf]

Finished in 5.97 seconds (files took 0.89226 seconds to load)
296 examples, 0 failures

➔ puppet-sssd git:(main) █
```

```
rwaffen@MacBookPro:~/Development/Voxpupuli/modulesync_config/modules/voxpupuli/puppet-sssd 1
→ puppet-sssd git:(main) podman run -it --rm -v $PWD:/repo:Z ghcr.io/voxpupuli/voxbbox:8
-f /Rakefile rubocop
Running RuboCop...
Inspecting 6 files
.....

6 files inspected, no offenses detected
→ puppet-sssd git:(main)
```