

Packaging the Free Software Web

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About me

- Ruby maintainer
- Debian CI maintainer
- web developer
- addicted to automation

Motivation

Debian in the Dark Ages of Free Software

Stefano Zacchiroli, Debconf 2014

- Desktop mostly a solved problem
- Mobile devices not quite there
- But most people are using desktops and phones as dumb clients to proprietary stuff "in the cloud"

Subject: Re: **About the recent DD retirements**

From: Anthony Towns

To: debian-project@lists.debian.org

- webapps are not a solved problem in Debian
- (among others which I won't get to)
- go read that thread!

Can Distros Make the Link? Let's Package the Customizable, Free Software Web of the Future!

Deb Nicholson and Christopher Allan Webber,
FOSDEM 2015 Distros Devroom

- Current privacy concerns
→ federation + self-hosting
- how can non-sysadmins self-host?
- "userops" (beyond "devops")

mailing list:

<http://lists.mediagoblin.org/listinfo/userops>

Are distributions really boring and a solved problem?

Lucas Nussbaum,
FOSDEM 2015 Distro Devroom

Server side apps in general
are not a solved problem

Summing up

- Server side applications are complicated
- Requires high effort from technical people
- End users can't self-host



Someone has got to do
something about this ...

Ideas



Automated configuration of packaged web applications

GSOC 2015|Outreachy project idea

Related projects

- Sandstorm
- Yunohost
- Bitnami (proprietary)

All are either not based on packages, or reinvent packaging

The free software web in Debian

- `$ apt-cache search web returns | wc -l`
3657
- 92 packages ship files in `/etc/apache2/`
 - excluding apache itself and modules
 - several web apps don't do it
(e.g. **redmine**)

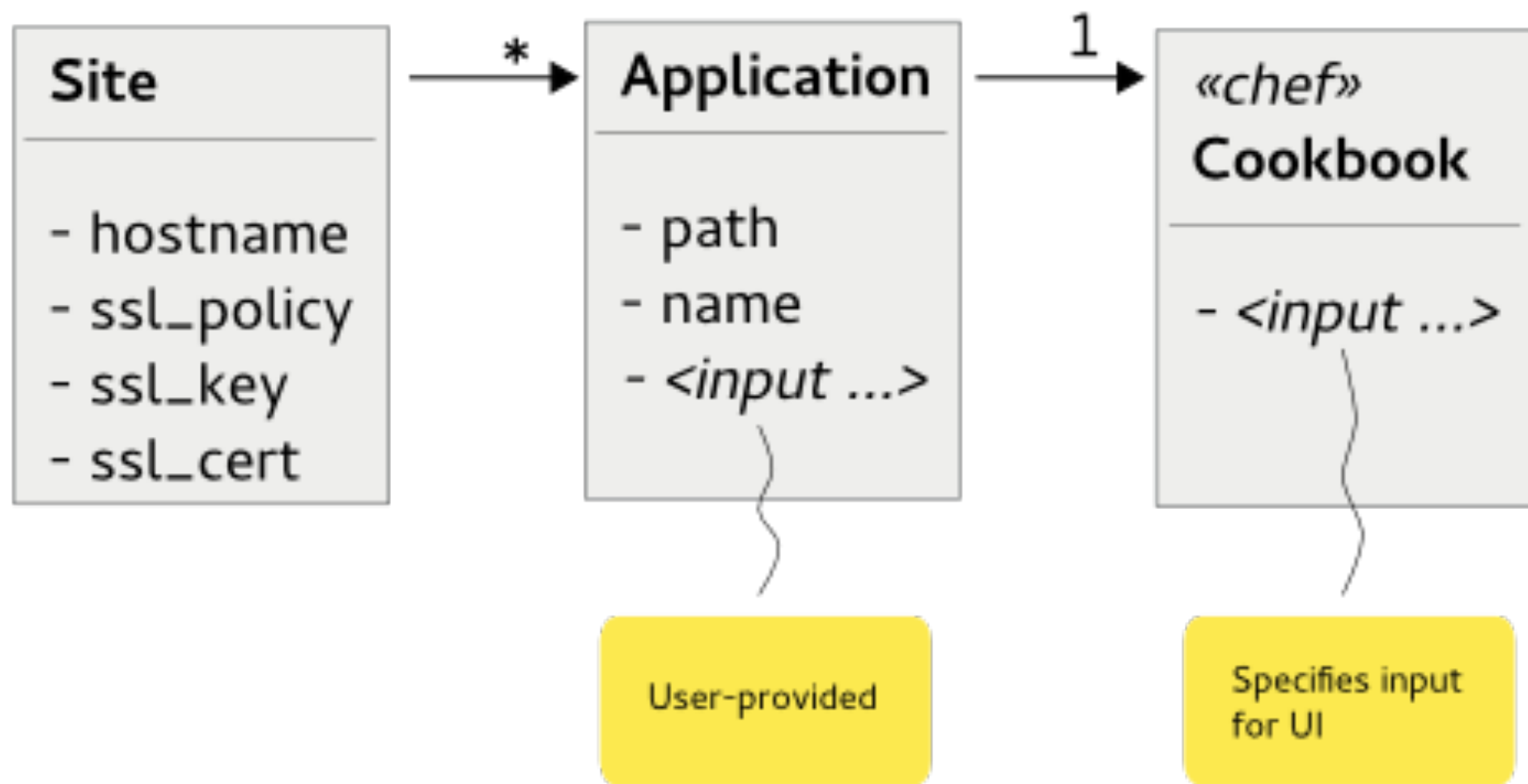
It seems we are quite good at packaging ...

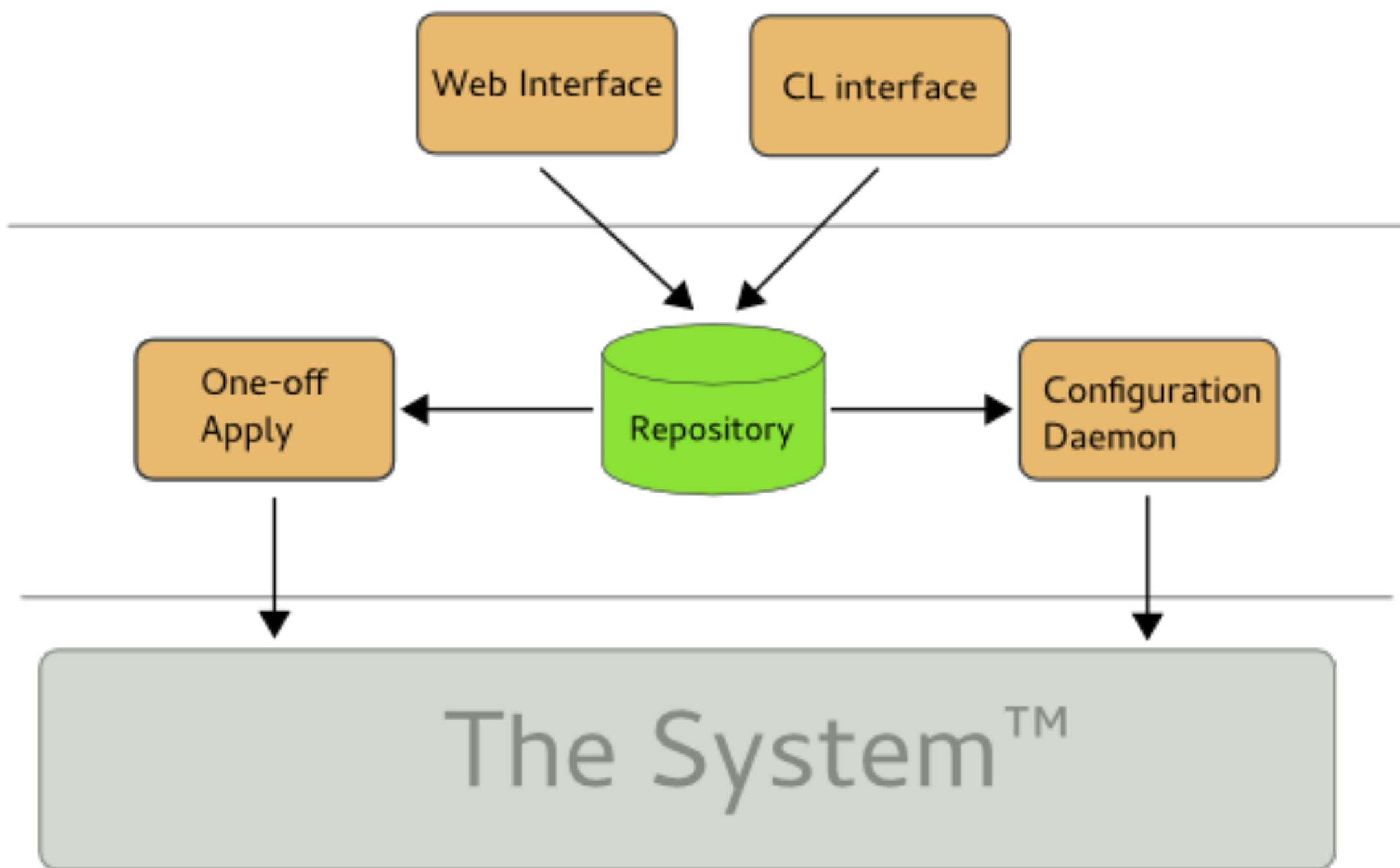
... but packages are not enough. Server-side applications still need one or more of

- cross-package configuration
- databases
- DNS setup
- email setup

Proposed solution

- Using packages (of course)
- A configuration layer over the package manager
 - existing "devops" tools should do it
 - I'll go with chef
- A UI layer on top to empower users with no technical background to configure their own server





Assumptions on packages

- Should be able to do all their specific configuration by themselves
 - not automating web server configuration is OK
- Should be able to handle their own upgrades (e.g. database schema changes)
 - **dbconfig-common** is your friend, but needs love
- Should not be crap [whishlist]

Current status: PoC

- Base system implemented
- add-site, add-app commands on CLI
- simple "static site" cookbook

<https://gitlab.com/terceiro/shak>

Example

```
$ shak add-site example.com  
$ shak add-app example.com static_site /  
  site_type=push  
$ shak apply
```

Static site deployed to
<http://example.com/>

Push contents via scp/rsync to
server:/var/lib/shak/data/example.com/_/
to update

Next steps

Next steps (1/2)

- web UI
- I18N
- GSOC|Outreachy: support as many packages as possible
- Improve web apps policy
- Send patches

Next steps (2/2)

- Easy bootstrapping
 - mostly just
`apt install $tool`
- prebuilt images
 - mostly just
`debootstrap --include=$tool`
- spawn new servers in the cloud

Ways to contribute

- Code of course
- Testing, bug reports
- Ideas on DNS/SSL/email handling
- Security audits
- Translations

<https://gitlab.com/terceiro/shak>