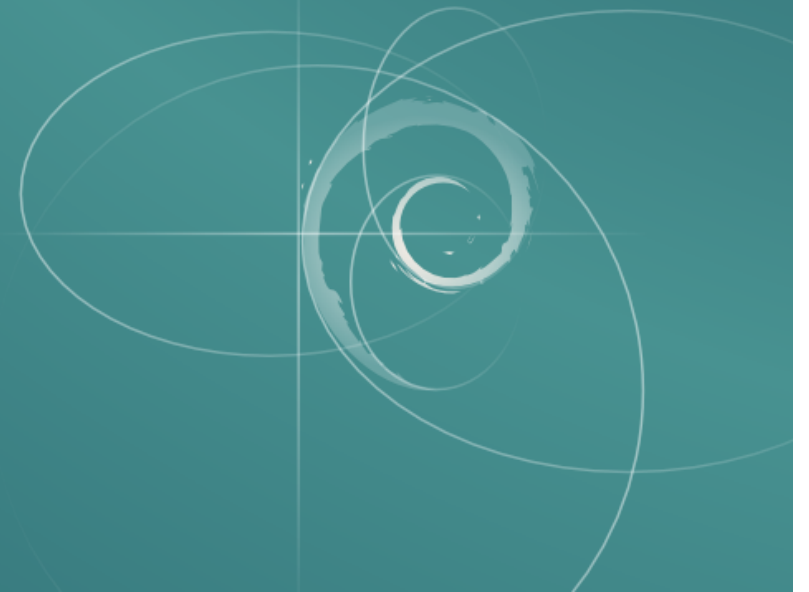


packaging the free software web for the end user

Antonio Terceiro
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thoughts on debconf15







the venue is
really nice



kids + families = ♥

late night hacking
means no morning
briefings for you

packaging the free software web for the end user

Antonio Terceiro
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problem:

I want the web to be more distributed and federated, and less centralized

- server side applications are complicated
- requires high/boring effort from technical people
- end users can't do it at all

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 ...

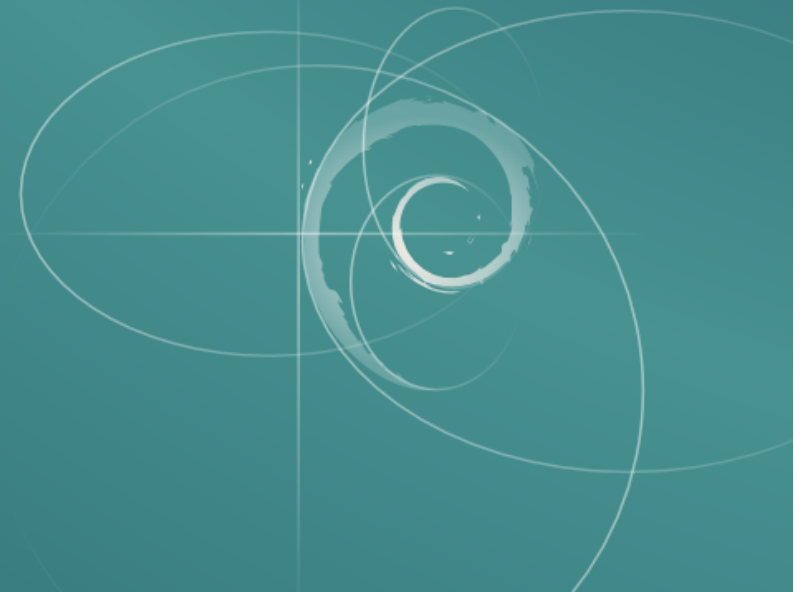


but what is
packaging?

sometimes packages
are not enough

- no standard
- cross-package config
- databaseS
- DNS setup
- email setup

my history with the topic



talks that moved me

- Stefano Zacchiroli (debconf14)
- Lucas Nussbaum (fosdem'15)
- Nicholson/Webber (fosdem'15)

an email that moved me

Anthony Towns

"About the recent DD retirements"
(debian-project)



started hacking on
a PoC on February 2015

presented at
MiniDebconf France
in April 2015

very useful feedback

got a GSoC 2015 slot

and an awful lot of
student submissions

GSoC 2015

Thiago Ribeiro

Software Engineering, UnB

almost-unhealthy
amount of hacking
during debconf15

quiet hacklabs FTW

stopped in the middle to
upgrade jquery to the latest
upstream release and sort of
adopt it in the middle

#730014



continued hacking ...

... and today
you will see a
live demo

\0/

goal:

automated configuration of
packaged web applications



goal (alt):

allowing everyone to have
their own debian server in a
secure and maintainable way

shak

self hosting application kit

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

<https://anonscm.debian.org>

[/cgit/users/terceiro/shak.git](https://anonscm.debian.org/cgit/users/terceiro/shak.git)

related projects

- Sandstorm
- Yunohost
- Bitnami (proprietary ×)

good ideas, but reinvent packaging

design: basics

- using official debian packages
- A config management layer on top
 - minimal work for good out of the box experience
 - push changes in packages

design: basics

- new abstraction: application
- one layer above packages
- one application will typically need one or more packages

design: UI

- a CLI for the so inclined
(and for automated testing)
- a nice graphical UI to
empower users with no
technical background

design: assumptions on packages

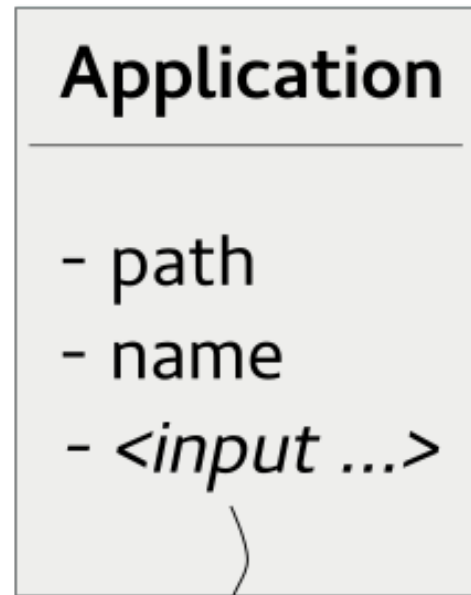
- DTRT
 - not automating web server configuration OK-ish
- handle their own upgrades
 - `dbconfig-common` helps with database stuff

**design: nice
to have in packages**

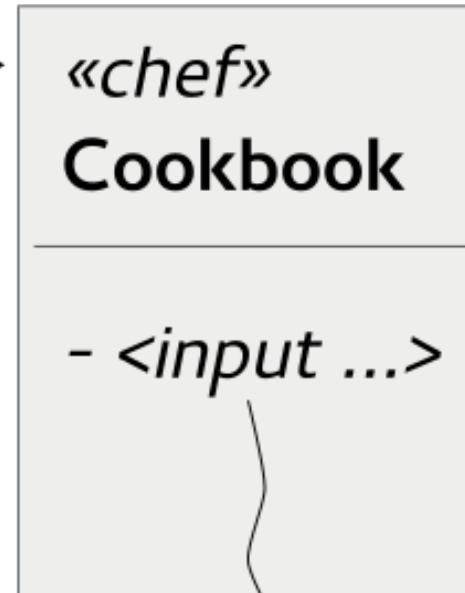
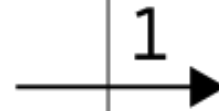
- support for multiple instances
- not being crap

data

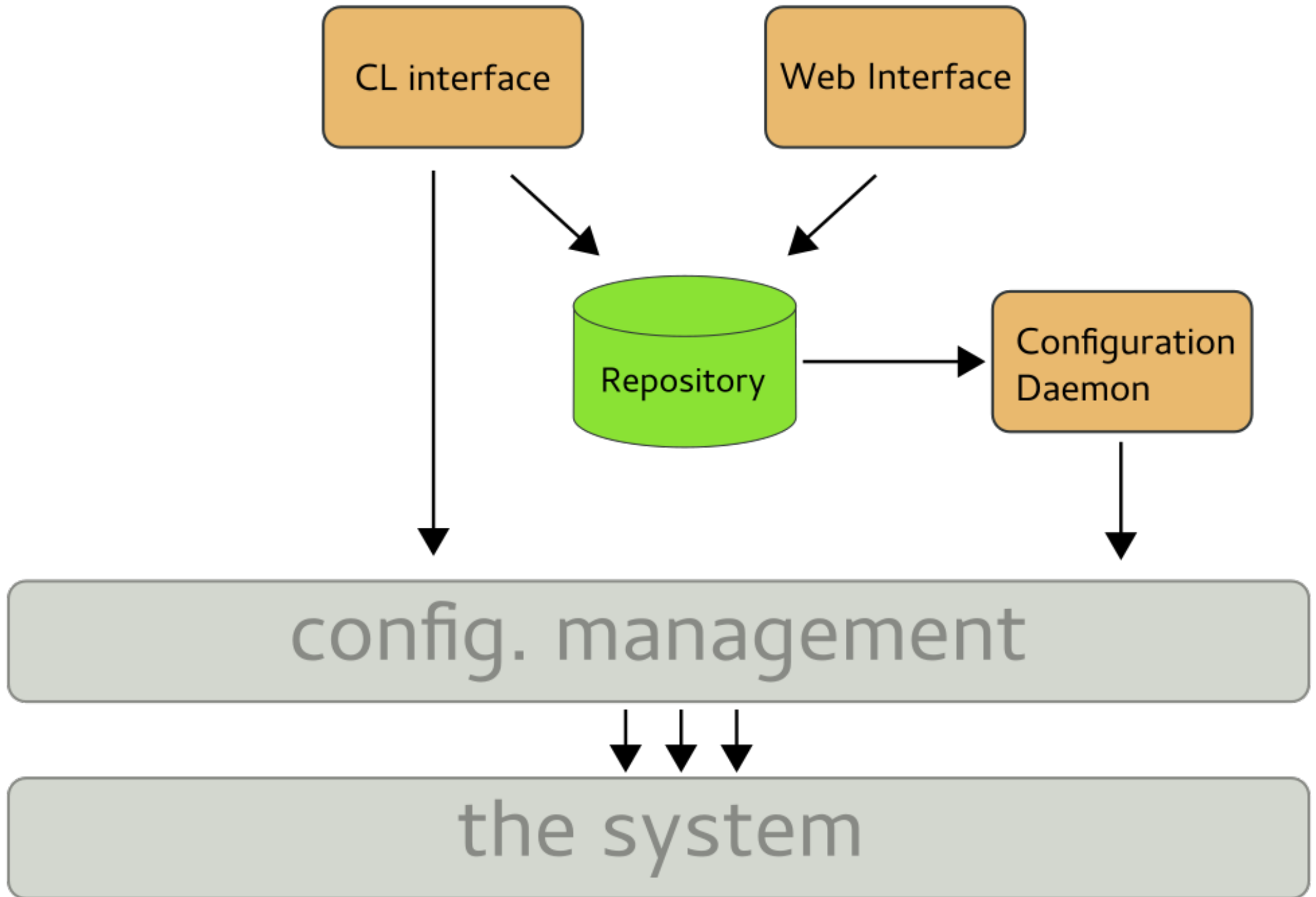
code



User-provided



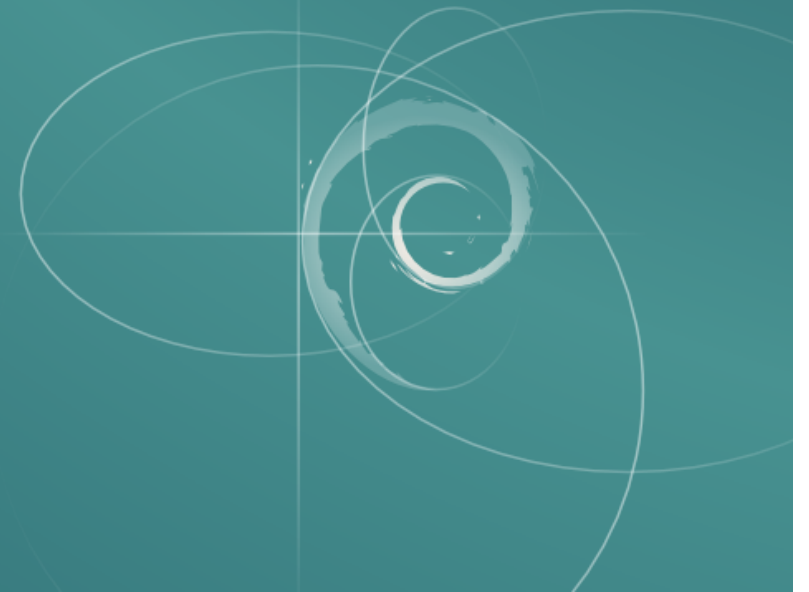
Specifies input for UI



design: code

- Ruby (off-Rails)
- chef for config. management
- automated tests

current state



Current status: **alpha**

- Base system implemented
- installation/updates work
- CLI + web UI
- removing applications
not implemented yet

available applications

- static site
- wordpress (Thiago/gsoc)
- owncloud (Thiago/gsoc)
- email (Thiago/gsoc)

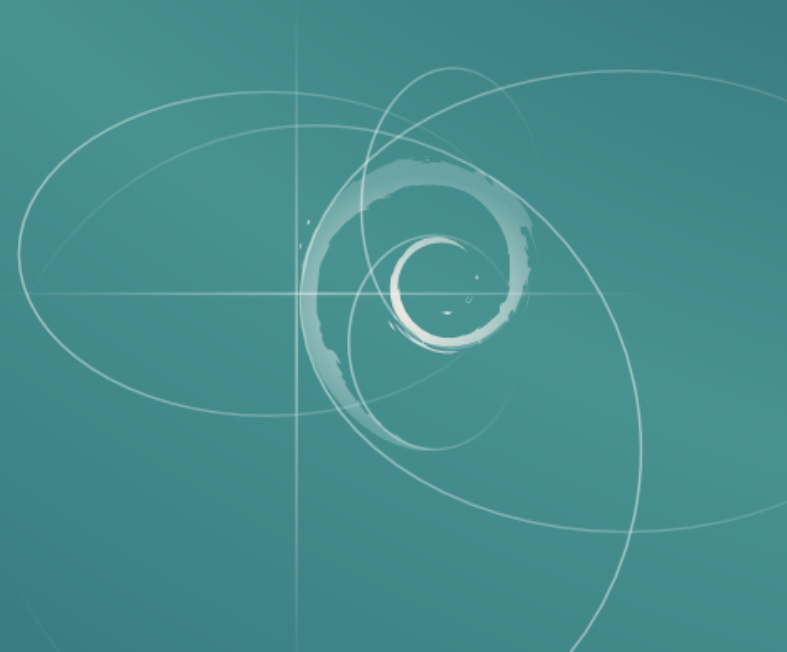
https by default

- also by Thiago/gsoc
- self-signed certs for now
- looking forward to let's encrypt or other viable solutions

demo!



the future



next steps

- upload to Debian
- improve web apps policy
- integrate more packages

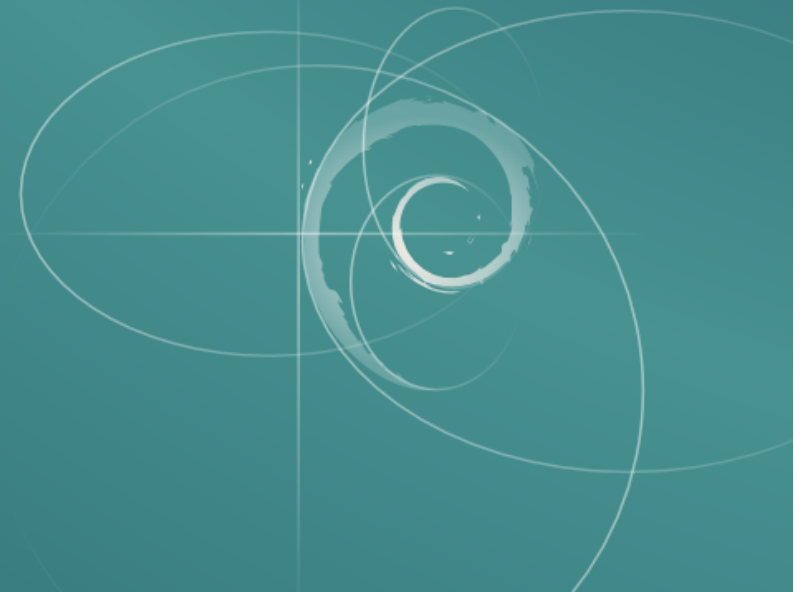
next steps (2)

- easy bootstrapping
`$ apt install shak`
- prebuilt images
`$ debootstrap \`
`- - include=shak`

next steps (3/3)

- spawn new servers in the cloud
- prebuilt images for common low-cost, low-power hardware
 - talk to FreedomBox people

how you can help





lots of work ahead!

collaborators needed

you can request your
package to be added

- issues on gitlab
- debian bts

ways to help (1/2)

- usability testing
- bug reports
- documentation
- translations

ways to help (2/2)

- code of course
- code reviews
- ideas on dns/ssl/email handling
- security audits

discussion

- #debian-webapps
- debian-webapps@l.d.o

didn't ask folks there



questions ?