cdi.st

configuration as a service
Who’s that guy?
Topics

• Configurations → Configuration Management
• Configuration as a Service (CaaS)
• cdist: configuration management
History

- Manual Configurations (~1960)
- Configuration Management (~1993)
- Configuration as a Service (CaaS) (2014)
Configuration

A configuration is set of parameters with values that describes a target state.
Configuration Examples

- **Virtual machine** web01 runs on host42
- **Backup** for web01 contains /home
- **User** “app” exists on web01
- **Application Server** Ruby on Rails is installed on web01
- **Load Balancing** is **configured** for web01 .. web20 Servers
Applying Configurations
Configuration Management
Why Configuration Management?
Configuration Management

Manage configurations in a well defined way.

- Reproducible
- Documentation
- Idempotent
- Scaling out
Using Configuration Management
Developer – no Sysadmins
Developer does not know CM
No Configuration Management

Because...

• Developer does not know
  – How to configure
  – How to use Configuration Management

• Developers **should not** know
Developers cannot configure
cdi.st

configuration as a service

Nico Schottelius - UCMS14 - 20140619
Configuration as a Service, CaaS:

Apply configurations to your systems with minimum knowledge required for the configuration or the configuration management system.
Avoid Complexity
Configuration as a Service
XaaS

X as a Service:
Have somebody else do it automatically for you.
Self Service.
How it works

Grant cdi.st access to my systems
Select Configurations

Welcome to cdlt: cloud configuration.

cdlt: will totally change your experience of configuring your UNIX/Linux servers. No more hassle with configuration files, we configure your systems.

You can try out cdlt with 2 configuration runs and once you want more, you can buy as many runs as you want.
Configure Selected Hosts
Have Services Running
cdi.st

background information

Nico Schottelius - UCMS14 - 20140619
cdi.st

- Website based on Ruby on Rails
- Backend based on cdist
Configurations

- Huge existing set of configurations
- Ruby on Rails Hosting
- cdist configuration management
- Web Servers
- Database Server
- ...
cdist

next generation configuration management

Nico Schottelius - UCMS14 - 20140619
What is cdist?

- Next Generation Configuration Management
- Less Bugs
- Learned from mistakes others made
- More
  - flexible
  - efficient
  - fun
Next generation configuration management?

Huh?
Configuration Management - NG

Lessons learned from the mistakes others made

- Easy to use – no facepalm effect
- Simple design – no grey hair effect
- Push Support – for coordinated changes
- DRY – Reuse existing technologies
- FOSS – GPL, not half commercial
- Installation support – in 4.0pre branches
- Not affiliated with $distro $vendor $evil_vendor_lockin
Why cdist?

- Requires only ssh on the target host
- Core functionality supports different OS
- Development started at ETH Zurich
- Made in Switzerland
- Scalable Design
cdist history

- 2010-11-10: LISA'10 BoFs
- 2011-03-07: First public release of cdist
- 2011-09-16: Rewrite cdist core in python
- 2013-01-01: Founded ungleich GmbH
- ...: Many releases, growing community
- 2014-05-05: Released cdist 3.1.5
cdist Features

- Secure (SSH)
- Simple
- Push based
- Scalable
- Proven Technologies
- Shell Script
- Well documented
- Open Source
- Zero Dependency
- Open Source
The big picture

Initial manifest

explorer

type

manifest

explorer

parameter

gencode-*

code-*
cdi.st

configuration as a service: summary

Nico Schottelius - UCMS14 - 20140619
Enable Users
No System Engineer Required
Reduce Complexity

**Past**

- Users depend on System Engineer
- Lot of knowledge required
- Investment into development

**CaaS**

- Users can configure themselves
- Users defines target state
- Reuse existing configurations
Outcome

- Enable users to configure their systems
- Reduced complexity
- Focus on core competences
- Growing number of configurations
I want to use cdi.st

- cdi.st public release planned for August 2014
- Beta running at customers since June 2014
- Send mail to cdi.st@ungleich.ch
Thank you

• Follow us on Twitter: @ungleich
• cdi.st@ungleich.ch
• http://www.ungleich.ch