

Puppet in the Open Source OpenStack Infrastructure

*Puppet Camp SF
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Elizabeth K. Joseph

- Linux hobbyist since 2002
- Professional systems administrator since 2006
- Contributor to Ubuntu, Debian and OpenStack projects
- But perhaps most importantly...

Member of the OpenStack Infrastructure team

We have open sourced our infrastructure!


Lots (about 100!) of projects, including ones for configuration available via:

<https://git.openstack.org/cgit/openstack-infra>

OpenStack git repository browser - Mozilla Firefox

OpenStack git reposit... x +

git.openstack.org/cgit/openstack-infra Search

 **openstack™** OpenStack git repository browser
CLOUD SOFTWARE

index search

Name	Description
<i>openstack-infra</i>	
openstack-infra/activity-board	Tech community metrics dash of the OpenStack community based on the M
openstack-infra/askbot-theme	Theme for ask.openstack.org.
openstack-infra/bugdaystats	Tool to produce static HTML that shows progress during a Bug Day
openstack-infra/devstack-gate	devstack-gate
openstack-infra/elastic-recheck	Classify tempest-devstack failures using Elasticsearch
openstack-infra/gear	Pure-Python asynchronous interface to Gearman
openstack-infra/gearman-plugin	The jenkins gearman plugin
openstack-infra/gerrit	Fork of Gerrit used by OpenStack
openstack-infra/gerritbot	gerritbot
openstack-infra/gerritlib	gerritlib
openstack-infra/git-review	git-review
openstack-infra/gitdm	A fork of Jonathan Corbet's gitdm for OpenStack
openstack-infra/groups	OpenStack Groups community portal
openstack-infra/groups-static-pages	Community portal static pages
openstack-infra/infra-manual	infra-manual
openstack-infra/infra-specs	OpenStack Infrastructure Blueprint Repository
openstack-infra/irc-meetings	OpenStack IRC meetings schedule
openstack-infra/jeepyb	Gerrit Project Builder Tools

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Why?

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Why?

Examples are awesome

*(I don't want to spend all week figuring out how to use
your puppet module)*

Why?

Encourages better practices

(though delayed, our upgrade to Puppet 3 was not so painful)

Why?

Allows others in your organization to suggest changes

Why?

Sharing is nice

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OK, so how?

- Prepare policies
- Segregate code
- Document
- Share!

Have an open source policy

All software used in your infrastructure is
Open Source

...if not, segregate out proprietary

Licenses!

Add a license to your configuration files :)

Seriously.

This is important.

Don't make me email you to ask the license of your config.

Puppet: Step 1

Leverage existing modules or write your own
with the intent of sharing

Apache
MySQL
Reviewday

Keep these outside your generic configuration
tree

(You're already doing this, right?)

Puppet: Step 2

Split out:

system configuration
project configuration

This makes it easier to consume by others

Puppet: Step 3

Split out non-sensitive custom configurations
into your own module

Example:

http://git.openstack.org/cgit/openstack-infra/system-config/tree/modules/openstack_project/manifests/zuul_prod.pp

(Variables are your friends!)

Puppet: Step 4

Use Hiera for sensitive data

(Hiera is my favorite thing ever (except for when it's not))

Puppet: Step 5

Set up PuppetBoard

For example: <http://puppetboard.openstack.org/>

Allows people in your org/community to see status without bugging folks with shell access



PuppetDB currently only returns active nodes.

Type here to filter

Status		Hostname	Catalog compiled at	Last report	
unchanged 0	0	afs01.dfw.openstack.org	Unknown	Wednesday, January 28 2015 5:33 PM	Latest Report Reports
unchanged 0	0	afs01.ord.openstack.org	Unknown	Wednesday, January 28 2015 5:34 PM	Latest Report Reports
unchanged 0	0	afsdb01.openstack.org	Unknown	Wednesday, January 28 2015 5:34 PM	Latest Report Reports
unchanged 0	0	afsdb02.openstack.org	Unknown	Wednesday, January 28 2015 5:34 PM	Latest Report Reports
changed 80	0	cacti.openstack.org	Saturday, July 5 2014 12:20 PM	Wednesday, January 28 2015 5:44 PM	Latest Report Reports

Share!

(Oh, and make sure you have a license)

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Document

- Links to source
- Work flow for using the configuration
- Contribution instructions
 - Direct commits/reviews
 - Bug reports
- Bootstrapping and glue

Who else has open source Puppet?

Debian: <https://dsa.debian.org/>

Mozilla: <https://wiki.mozilla.org/ReleaseEngineering/PuppetAgain>

Jenkins: <http://jenkins-ci.org/content/come-join-infra-team>

Resources

OpenStack Project Infrastructure docs:
<http://ci.openstack.org/>

OpenStack Infrastructure repository:
<https://git.openstack.org/cgit/openstack-infra/>

OpenStack specs for when we split out some of our configs:

<http://specs.openstack.org/openstack-infra/infra-specs/specs/config-repo-split.html>

<http://specs.openstack.org/openstack-infra/infra-specs/specs/puppet-modules.html>