

Open Source Systems Administration

Elizabeth K. Joseph
@pleia2

HP
OpenStack Infrastructure Team

Ada Lovelace Day at ThoughtWorks, 15 October 2014



The OpenStack Infrastructure team maintains the servers OpenStack developers use worldwide to contribute to OpenStack

Our Infrastructure is also an Open Source project

- All code repositories are available online:
 - <https://git.openstack.org/cgit/openstack-infra>
- All system documentation too:
 - <http://ci.openstack.org/>
- Changes can be proposed by anyone through a public code review system (Gerrit):
 - <https://review.openstack.org/>
- Other projects and companies use our code.

Submitting changes? git-review and Gerrit

We use a lot of git, but we submit changes to code review:

```
elizabeth@r2d2$:~/git/openstack-infra/publications$ vim index.html
elizabeth@r2d2$:~/git/openstack-infra/publications$ git commit -a
[toolsconfigs/updates 0c63f4a] Update tools and review purposes.
 1 file changed, 4 insertions(+)
elizabeth@r2d2$:~/git/openstack-infra/publications$ git review
Amending the commit to add a gerrit change id.
remote: Resolving deltas: 100% (2/2)
remote: Processing changes: new: 1, refs: 1, done
remote:
remote: New Changes:
remote:   https://review.openstack.org/128722
remote:
To ssh://lyz@review.openstack.org:29418/openstack-infra/publications.git
* [new branch]      HEAD -> refs/publish/sysadmin-codereview/toolsconfigs/updates
```

Change-Id: I1bc4adf9f7a0738426649d54b67e6aa13acffe5f

Owner: Elizabeth K. Joseph

Project: openstack-infra/publications

Branch: sysadmin-codereview

Topic: toolsconfigs/updates

Uploaded: Oct 15, 2014 10:53 AM

Updated: Oct 15, 2014 10:53 AM

Submit Type: Merge if Necessary

Status: Review in Progress

Commit Message [Permalink](#)

Update tools and review purposes.

We've begun using bashate and beaker tests on some of our projects, adding those. Also note that we use the review system for translations imports and specifications.

Change-Id: I1bc4adf9f7a0738426649d54b67e6aa13acffe5f

Reviewer	Code-Review	Verified	Workflow
Jenkins	<input checked="" type="checkbox"/>	+1	

Jenkins	Oct 15, 2014 10:53 AM
noop	SUCCESS

- Need Verified
- Need Code-Review
- Need Workflow

Dependencies

Reference Version:

Patch Set 1 48516ac0b1a08626a9a2397b9c1f78a554687418 (gitweb)

Author	Elizabeth K. Joseph <lyz@princessleia.com> Oct 15, 2014 10:50 AM
Committer	Elizabeth K. Joseph <lyz@princessleia.com> Oct 15, 2014 10:53 AM
Parent(s)	d5c6d675091b52b6808b64c716ea2bdc8a75f82c Update slides for Fossetcon
Download	checkout pull cherry-pick patch Anonymous HTTP SSH HTTP git fetch https://review.openstack.org/openstack-infra/publications refs/changes/22/128722/1 && git cherry-pick FETCH_HEAD

	File Path	Comments	Size	Diff	Reviewed
	Commit Message			Side-by-Side	Unified
M	index.html		+4, -0	Side-by-Side	Unified
			+4, -0	All Side-by-Side	All Unified

Commit Message

Up to change

Patch Set Base 1	Patch Set 1
+10 ... skipped 83 common lines ... +10	
84 </div>	</div>
85	85
86	86
87 <div class="slide">	<div class="slide">
88 <h1>What we use it for</h1>	<h1>What we use it for</h1>
89	89
90 	
91 All core OpenStack projects	All core OpenStack projects
92 StackForge projects	StackForge projects
93 Documentation	Documentation
	Translations imports
	Project specifications
94 Systems Administration!	Systems Administration!
95 	
96	96
97 </div>	</div>
98	98
99 <div class="slide">	<div class="slide">
100 <h1>What we do</h1>	<h1>What we do</h1>
101	101
102 <div align="center"></div>	<div align="center"></div>
103	103
	104
	105
... skipped 28 common lines ...	
132 Anyone can write code reviews	Anyone can write code reviews
133 	
134	134
135 </div>	</div>
136	136
137 <div class="slide">	<div class="slide">
138 <h1>What Systems Administrators Check</h1>	<h1>What Systems Administrators Check</h1>
139	139
140 	
141 flake8 (pep 8 and pyflakes)	flake8 (pep 8 and pyflakes)
	bashate
142 puppet parser validate	puppet parser validate
143 puppet-lint	puppet-lint
	Beaker
144 XML	XML
145 Alphabetized project files	Alphabetized project files
146 	
147	147
148 </div>	</div>
149	149
150 <div class="slide">	<div class="slide">
151 <h1>Peer Review</h1>	<h1>Peer Review</h1>
152	152
153 	
	153
	154
	155
	156
	157
+10 ... skipped 65 common lines ... +10	

Commit Message

Up to change

What's going on?

Cacti and Puppetboard

Cacti for system statistics:
<http://cacti.openstack.org/>

Puppetboard for Puppet status:
<http://puppetboard.openstack.org/>

- [-] All Hosts
 - Host: Localhost
 - Host: ci-puppetmaster.openstack.org
 - Host: eavesdrop.openstack.org
 - Host: elasticsearch01.openstack.org
 - Host: elasticsearch02.openstack.org
 - Host: elasticsearch03.openstack.org
 - Host: elasticsearch04.openstack.org
 - Host: elasticsearch05.openstack.org
 - Host: elasticsearch06.openstack.org
 - Host: elasticsearch07.openstack.org
 - Host: etherpad-dev.openstack.org
 - Host: etherpad.openstack.org
 - Host: git.openstack.org
 - Host: git01.openstack.org
 - Host: git02.openstack.org
 - Host: git03.openstack.org
 - Host: git04.openstack.org
 - Host: git05.openstack.org
 - Host: graphite.openstack.org
 - Host: groups-dev.openstack.org
 - Host: groups.openstack.org
 - Host: jenkins-dev.openstack.org
 - Host: jenkins.openstack.org
 - Host: jenkins01.openstack.org
 - Host: jenkins02.openstack.org
 - Host: jenkins03.openstack.org
 - Host: jenkins04.openstack.org

Graph Filters

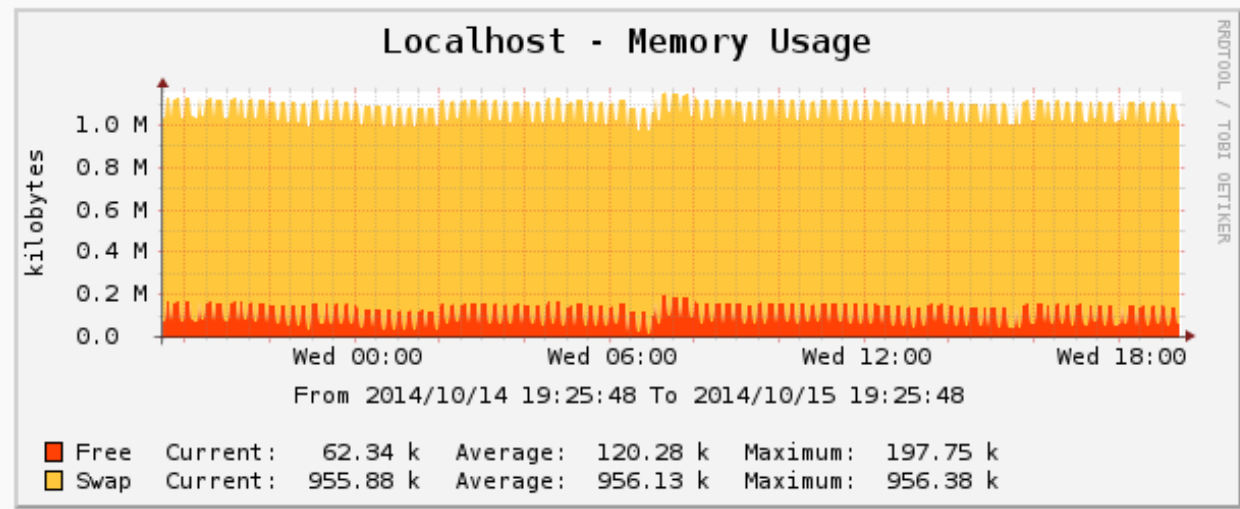
Presets: Last Day From: 2014-10-14 19:25 To: 2014-10-15 19:25 1 Day Refresh Clear

Search: Graphs per Page: 10 Thumbnails: Go Clear

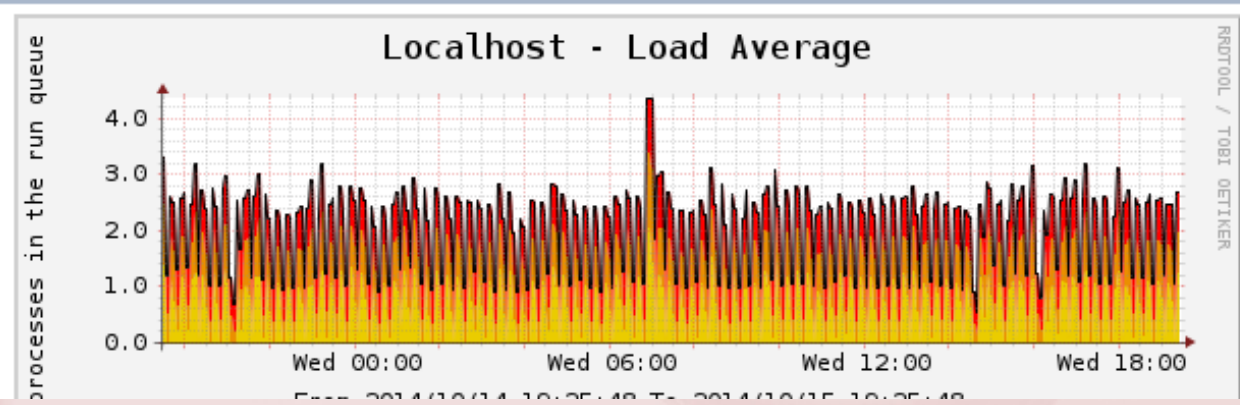
Showing All Graphs

Tree: All Hosts-> Host: Localhost

Graph Template: Linux - Memory Usage



Graph Template: Unix - Load Average



1 node

with status failed

7 nodes

with status changed

3 nodes

unreported in the last 0.5 hours

79

Population

13791

Resources managed

175

Avg. resources/node

Nodes status detail (11)

Status		Hostname	
unreported	None	fungi-test.openstack.org	No Report
unreported	6d 19h 16m	openstackid.org	Latest Report
unreported	1d 23h 46m	groups.openstack.org	Latest Report
failed	1 0	jenkins-dev.openstack.org	Latest Report
changed	0 68	cacti.openstack.org	Latest Report
changed	0 33	logstash.openstack.org	Latest Report
changed	0 1	groups-dev.openstack.org	Latest Report
changed	0 1	jenkins03.openstack.org	Latest Report

Challenges

Security

This week, POODLE! <https://review.openstack.org/#/c/128707/>

And more generally, the whole world knows what we run and how we run it

We need to fully trust *some* people

Some shell access is still required
(viewing logs, migrations, unusual service failures)

Private management of sensitive data
(keys, passwords)

Core reviewers have the power to push anything that passes tests through

Credits

CC BY-SA slide background source: "The gate's unlocked!!! by Tripp"

<https://www.flickr.com/photos/trippchicago/3769904793>

The whole OpenStack Infrastructure team for the extraordinary work they do!