

QA in the Open

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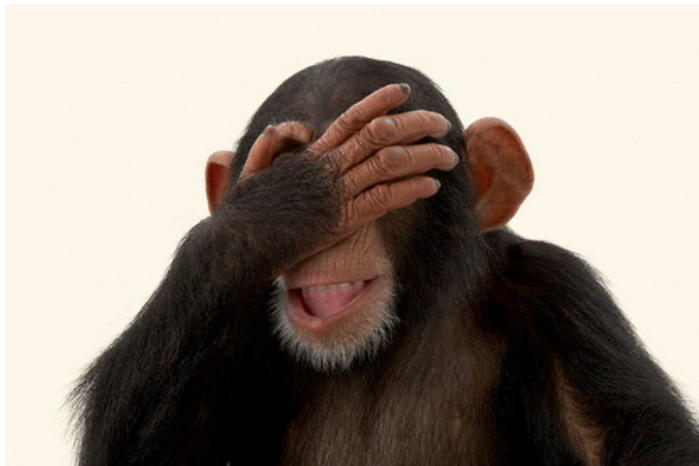
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<https://github.com/mtreinish/qa-in-the-open/tree/linuxcon-jp>

What do I mean by Open Source QA

- ▶ Doing Software QA in an Open Source manner
- ▶ Includes running tests and hosting results in the public
- ▶ Basically treat a project's QA like any other Open Source project

My Personal Experiences with Enterprise QA



What is OpenStack QA?

- ▶ Official Mission Statement:
Develop, maintain, and initiate tools and plans to ensure the upstream stability and quality of OpenStack, and its release readiness at any point during the release cycle.

Current QA Projects

- ▶ devstack
- ▶ devstack-plugin-cookiecutter
- ▶ devstack-plugin-ceph
- ▶ devstack-vagrant
- ▶ grenade
- ▶ tempest
- ▶ tempest-lib
- ▶ tempest-plugin-cookiecutter
- ▶ bashate
- ▶ stackviz
- ▶ hacking
- ▶ eslint-config-openstack
- ▶ os-testr
- ▶ os-performance-tools
- ▶ openstack-health dashboard
- ▶ karma-subunit-reporter

In The Beginning

- ▶ Projects had unit tests
- ▶ Some projects had functional tests
- ▶ Testing was central to OpenStack culture
- ▶ But, no dedicated effort on QA or testing

Then there was Tempest

- ▶ The OpenStack integration suite
- ▶ Runs against a running OpenStack cloud via the REST APIs
- ▶ First dedicated QA effort in the community

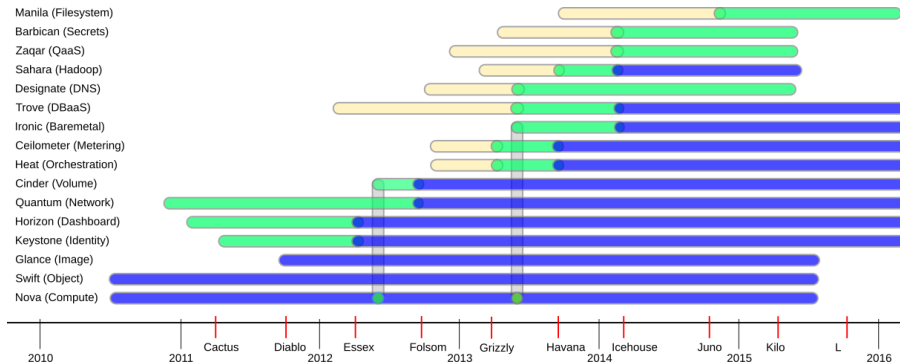
QA Becoming a Defined Group

- ▶ 2 years later a separate project was created in governance around QA
- ▶ Started with just 2 projects: Tempest and Grenade
- ▶ Slowly started to consolidate several existing and add new projects

Early Approach to QA

- ▶ Only support for testing **Integrated** and **Incubated** projects
- ▶ Closer to a more traditional top down approach
- ▶ Testing was mostly unit tests and tempest tests
- ▶ All integrated and incubated projects had to co-gate against each other in 1 large integrated gate queue

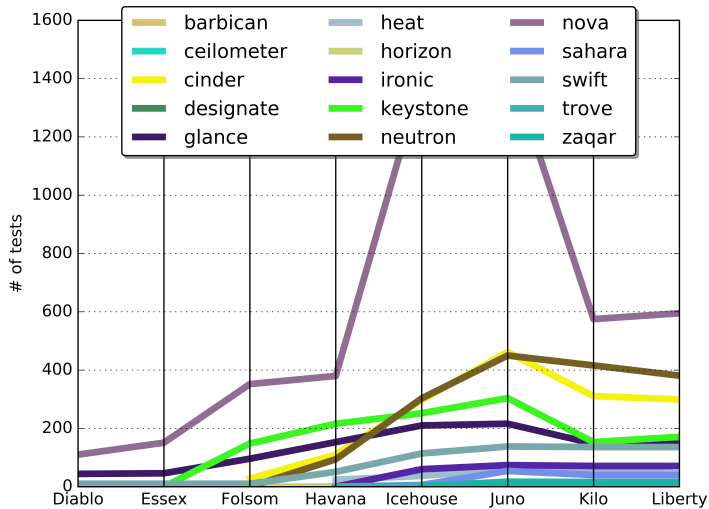
OpenStack Project Growth



QA Growing Pains

- ▶ QA Projects have a small core review team
- ▶ Limited expertise on newer projects
- ▶ Project teams weren't motivated to contribute

Tempest Tests per Project



The Big Tent

- ▶ OpenStack's most recent governance change
- ▶ Went from having a strict 2 stage approval process and a small set of OpenStack projects to a more inclusive approach
- ▶ Integrated and incubated projects no longer a thing
- ▶ Designed to switch from choosing winners to building an ecosystem

The Big Tent...



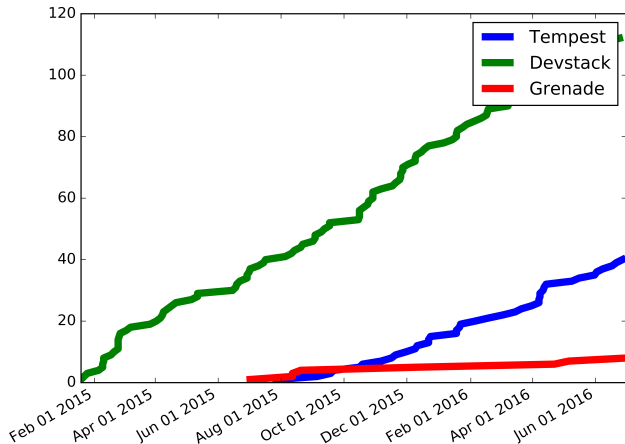
QA in the Big Tent

- ▶ QA projects will still provide direct support for base IaaS projects
- ▶ Provide stable plugin interfaces to expand functionality for other projects
- ▶ Better fits with the growth in projects

Introducing Plugin Interfaces

- ▶ Add stable interfaces to expand QA project functionality
- ▶ Enable any project to self service their own QA
- ▶ Concentrate on making things in QA projects externally reusable
- ▶ Started with Devstack, now Tempest and Grenade too

Lessons from OpenStack QA



- ▶ Monolithic and Separate doesn't scale
- ▶ Keeping Things Separate increases friction

Advantages

- ▶ Enables external audit of testing
- ▶ User confidence in project
- ▶ Enables independently repeatable testing
- ▶ Reusable components

Potential Issues

- ▶ Lack of Corporate Contribution
- ▶ Limited Free Resources for running tests
- ▶ Sometimes difficult to get community buy in

Where to get more information

- ▶ openstack-dev ML openstack-dev@lists.openstack.org
- ▶ #openstack-qa on Freenode
- ▶ <https://wiki.openstack.org/wiki/QA>

Questions?