

# QA in the Open

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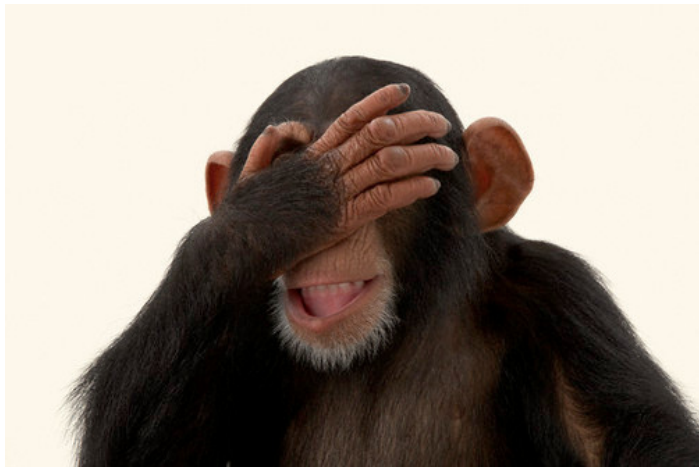
July 15, 2016

<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

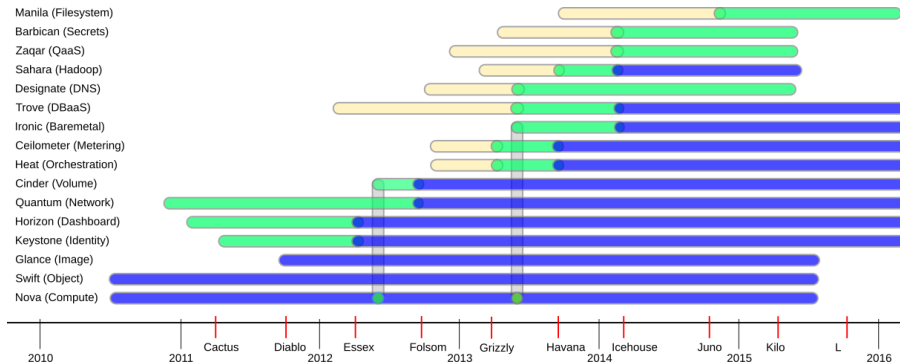
- ▶ 2 years later a separate project was created in governance around QA
- ▶ Started with just 2 projects: Tempest and Grenade
- ▶ Slowly started to consolidate several existing and add new projects



## 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

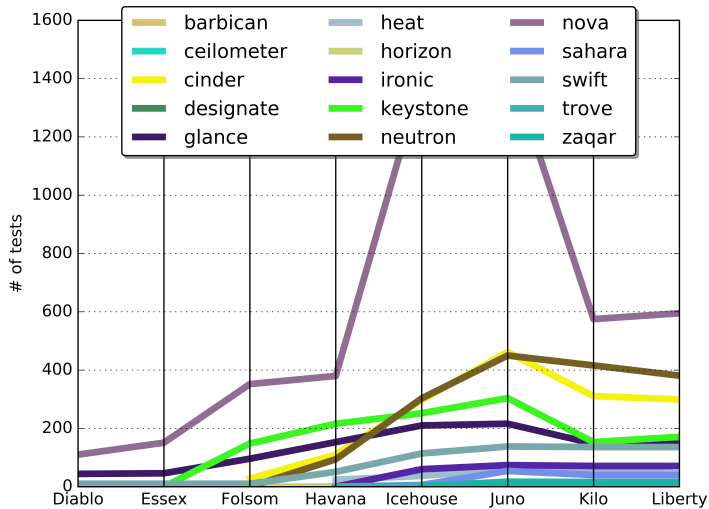
# OpenStack Project Growth



# 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

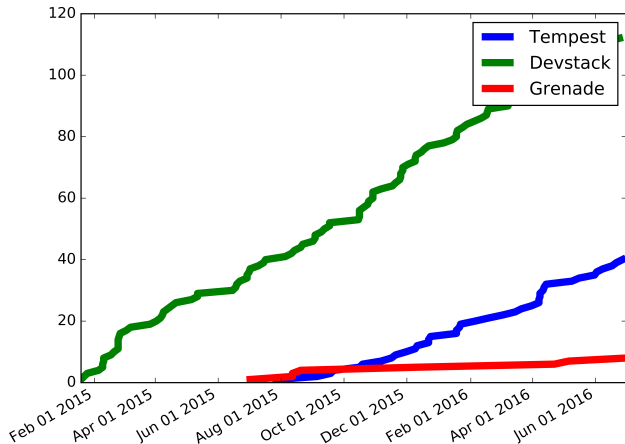
- ▶ QA projects will still provide direct support for base IaaS projects
- ▶ Provide stable plugin interfaces to expand functionality for other projects
- ▶ Better fits with the growth in projects

# 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](mailto:openstack-dev@lists.openstack.org)
- ▶ #openstack-qa on Freenode
- ▶ <https://wiki.openstack.org/wiki/QA>

Questions?