

Testing at Scale

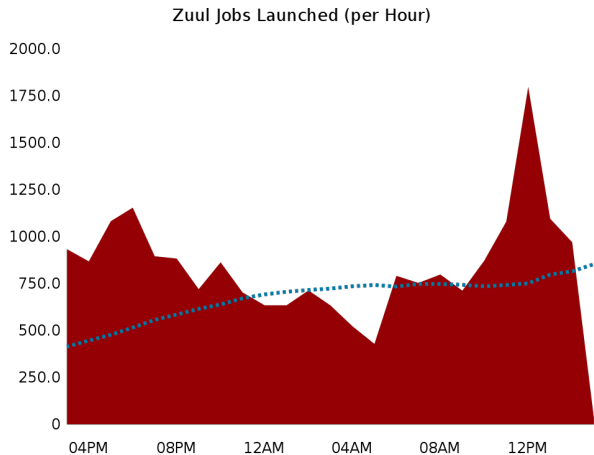
Andrea Frittoli
andrea.frittoli@gmail.com
andreaaf on Freenode
@blackchip76 on Twitter

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https://github.com/andreafrittoli/testing_at_scale

OpenStack CI in Numbers

- ▶ ~1500 contributors to Pike
- ▶ 6 Clouds + 2 run by OpenStack Infra
- ▶ 1600+ repos in openstack(|-dev|-infra)
- ▶ 20k lines Zuul configuration



Source: Zuul, Graphite

Testing OpenStack

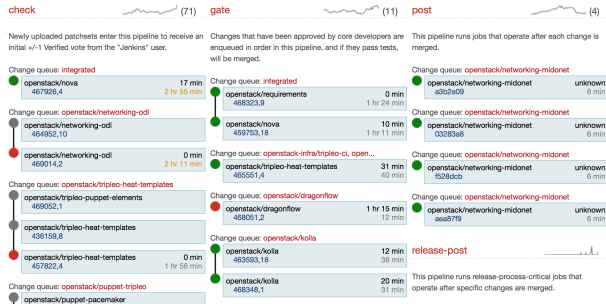


Status **Zuul** Rechecks Reviews Bugday OpenStack-Health

Zuul Status

Zuul is a pipeline oriented project gating and automation system. Each of the sections below is a separate pipeline configured to automate some portion of the testing or operation of the OpenStack project. For more information, please see [the Zuul reference manual](#).

Queue lengths: 0 events, 0 results. Filters: Expand by default: ☐



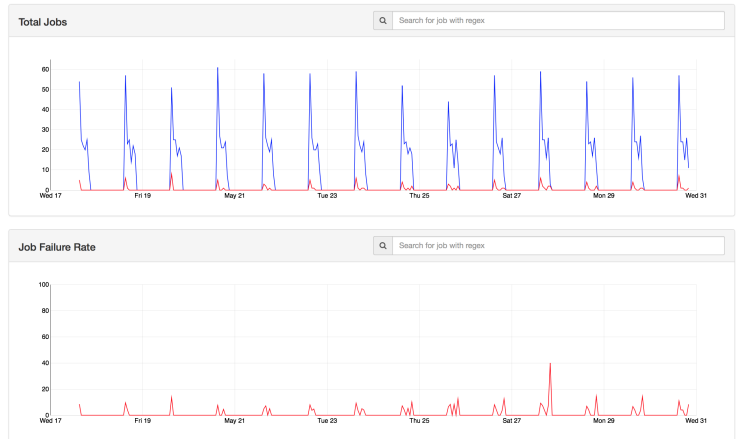
- Release ready master
- Check & Gate Pipelines
- Ephemeral test system

Source: <http://status.openstack.org/zuul>

Beyond the gate

- Periodic tests
- Release jobs

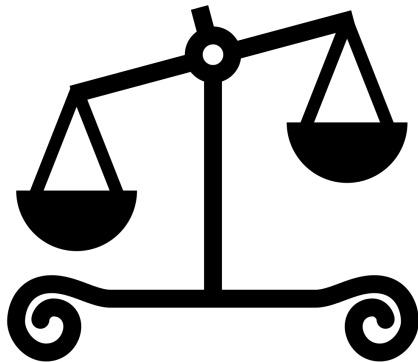
periodic jobs



Reference: status.openstack.org/openstack-health/

The unbalanced scale

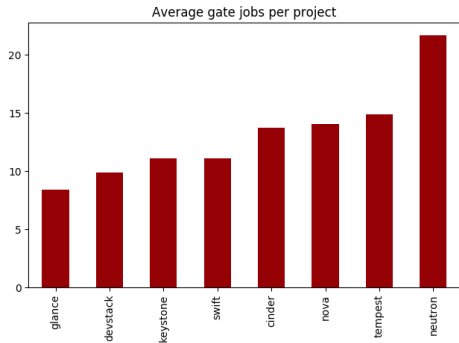
- ▶ Core reviewers
- ▶ Horizontal teams
- ▶ Running CI



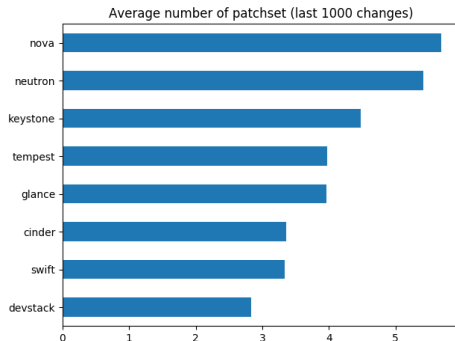
- ▶ Commits
- ▶ # of Tests
- ▶ # of Configurations

Not the scale I meant...

Life as a contributor



Source: subunit2sql DB



Source: Gerrit API

My day in reviews

- Change in devstack:

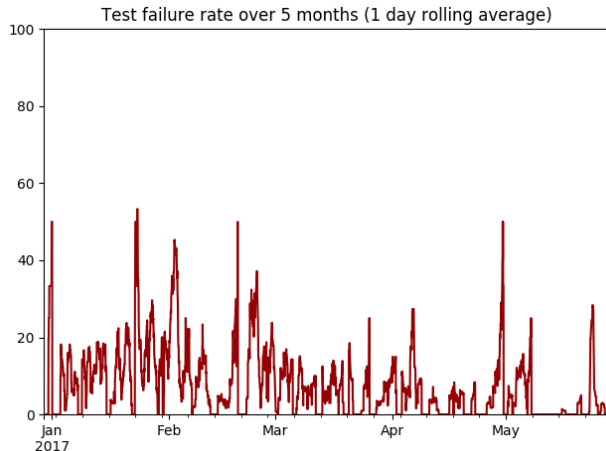
```
536      +      if [ -z "$VRIT_DRIVER" ]; then
537      +          # If there is not virt driver defined we assume nova is not installed
538      +          iniset $STEMPEST_CONFIG service_available nova "False"
539      +      fi
540      +
```

Source: <https://review.openstack.org/468060>

- CI reports all green
- Can you see the error?

Keep the gate flowing

- ▶ Number of services
- ▶ Service memory footprint
- ▶ Test load
- ▶ Libvirt instability under load
- ▶ Tempest bug in ssh test code
- ▶ Vanilla database configuration



Source: Zuul, Graphite

Data!

- ▶ Logs and their size in integration gate
- ▶ Test result data
- ▶ Zuul data

Tools

- ▶ TBD

Deeper into data

- ▶ TBD

Playing with AI

- ▶ TBD

References



Thank you!
Questions?