

How to Participate Open Source development

- Open Source development tooling and community in the upstream -

masayuki@igawa.io

Freenode GitHub Twitter LinkedIn

October 6, 2019

@openSUSE.Asia Summit 2019

<https://github.com/masayukig/oss-development-inside-story>

This work is licensed under a Creative Commons Attribution 4.0 International License



Agenda

1. Who am I?
2. Today's Goal
3. What is Open Source?
4. Examples
5. What is OpenStack?
6. Development Work Flow
7. Tools
8. True Stories
9. Summary

DISCLAIMER

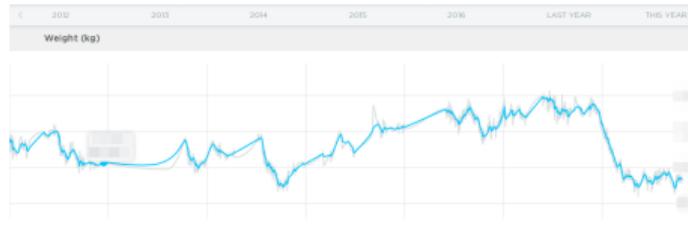
These slides are my own opinion

Who am I?

- ▶ Company : 1998.4-2015.12 Traditional IT company in Japan,
2016.1-2017.3 HPE -> 2017.3- SUSE -> 2019("Further Independence for SUSE")
 - ▶ SUSE OpenStack Cloud QE(Quality Engineering) Team
- ▶ Job: Senior Software Engineer/Open Source Programmer
 - ▶ [OpenStack QA](#) Up/Downstream development, Core Reviewer
(Tempest, OpenStack-Health, Subunit2SQL, Stackviz), [stestr](#)
 - ▶ stackalytics.com/?user_id=igawa, github.com/masayukig



- ▶ Books
 - ▶ [OpenStack Cloud Integration](#) (Japanese book) (one of the authors)
 - ▶ [Infra CI Pragmatic Guide - Ansible/GitLab](#) (Japanese book) (as a reviewer)
- ▶ Hobby: Bike(BMC SLR02), Clouds(OpenStack...), Diet(Low-carb), etc.



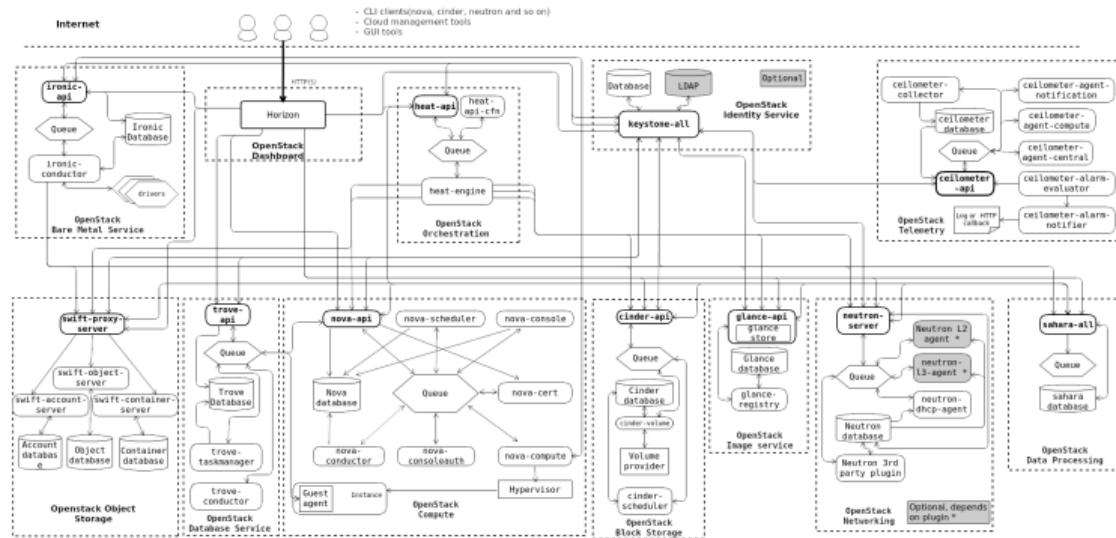
Introduction

Goal of today

- ▶ Development ways/tools in OpenStack/OSS communities
- ▶ To understand points of OSS development, and it's fun

What is the “OpenStack”?

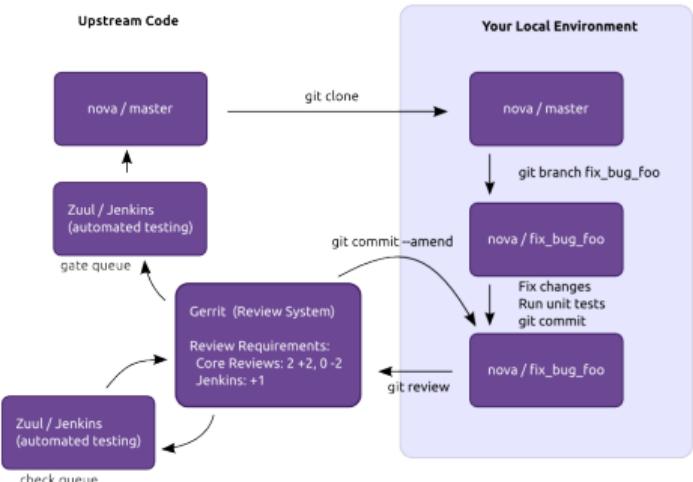
- Open Source Cloud Operation System: Apache License Version 2.0
- Written in Python
- There are a lot of ‘OpenStack’ projects: [63 projects\(2018-10-23\)](https://www.openstack.org/user-stories/)
- Released every 6 month: Latest version is called ‘Queens’
- Users: AT&T, AA, BBVA, Bloomberg, CERN, China Mobile, Gap, VEXXHOST, Volkswagen, WALMART, etc.. <https://www.openstack.org/user-stories/>



OpenStack の開発ワークフロー

<https://docs.openstack.org/infra/manual/developers.html>

1. StoryBoard ヘストーリー登録 & 議論
(Option)
2. パッチ作成、Gerrit でパッチ登録
3. Zuul にて CI 自動実行
4. Gerrit 上でレビュー
5. CI再度実行後、メインリポジトリへマージ



コミュニケーションツール

- ▶ IRC on Freenode: #openstack-*(dev,nova,glance,qa,..) <https://freenode.net/>
 - ▶ Mailing List: <http://lists.openstack.org/>
 - ▶ StoryBoard: <https://storyboard.openstack.org/>
 - ▶ Gerrit: <https://review.openstack.org/>
 - ▶ Launchpad: <https://launchpad.net>

The screenshot shows the freenode homepage. At the top, there's a green header bar with the word "freenode" in white. To the right of the header is a search bar containing "Search using Google" and a magnifying glass icon. Below the header, the main title "Welcome to freenode — supporting free and open source communities since 1998" is displayed in a large, dark font. Underneath the title are three dark gray rectangular buttons with white text: "Chat" (with a speech bubble icon), "Register a group" (with a user group icon), and "Knowledge Base" (with a question mark icon).

Did you hear? freenode #live is coming to town!

A little over a month from now, the second freenode alive will take place at the Curious in Bristol, with talks from many free and open source community leaders such as Leslie Hawthorn, VM brisseur, Chris Lamb and Bradley Kuhn. freenode alive once again brings an international free software gathering to the South West.

Other exhibitors at this year's event will be the returning main sponsor, [Private Internet Access](#), as well as the Free Software Foundation, OpenSUSE, Minetest, Linux Kernel and the Handshake Project.

[Handshake](#) is a new decentralized alternative DNS root, and for a short time before

| lists.openstack.org Mailing Lists | |
|--|---|
| Welcome! | |
| Below is a listing of all the public mailing lists on lists.openstack.org. Click on a list name to get more information about the list, as to subscribe, unsubscribe, and change the preferences on your subscription. To edit the general information page for an unadvertised list, open a URL similar to this one, but with <code>a=edit</code> at the end of the list name appended. | |
| List administrators, you can visit the list admin overview page to find the management interface for your list. | |
| If you are having trouble using the lists, please contact support@lists.openstack.org . | |
| List | Description |
| Admin-control | [no description available] |
| App-categories-admin | [no description available] |
| App-categories | The OpenStack Community Team is the main contact point for publicly running a local OpenStack Group. |
| Bugs-compling | [no description available] |
| Elections-committee | [no description available] |
| Enterprise-vg | The Enterprise work group |
| Foundation | General discussion list for activities of the OpenStack Foundation. |
| Foundation-board | OpenStack Foundation Board of Directors |
| Foundation-testing | working group to set the openstack foundation testing standards for humans not drivers |
| Icinga-vg | Icinga Working Group Mailing List |
| Legal-discuss | Discussions on legal matters related to the project |
| Marketing | The OpenStack Marketing list is the major to facilitate discussion and best practice sharing among marketers and event organizers in the OpenStack community. |
| Openstack-announce | [no description available] |
| Openstack-advisories | Key announcements about OpenStack & Security advisories |
| Openstack-committers | [no description available] |
| Openstack-constant | The team responsible to write content for openstack.org domain |
| Openstack-de | List for German speaking OpenStack users |



OpenStack

OpenStack is a cloud computing platform that provides a set of services for managing compute, storage, and networking resources in a distributed environment. It is designed to be highly scalable and can be used to build private clouds or public clouds.

Downloads

- Code
- Logs
- Blueprints
- Translations
- Answers

Required: 2014-07-01 by [Pavel Nelin](#)

The OpenStack Open Source Cloud Mission: to produce the ubiquitous Open Source Cloud Computing platform that will meet the needs of public and private clouds regardless of size, by being simple to implement and massively scalable.

[Metadata](#) ([https://review.openstack.org](#))
[API](#) ([http://wiki.openstack.org](#))
[How-to](#) ([http://openstack.org/doc/openstack-project/](#))
Hosting ref: [openstack/habits.openstack.kings](#) - see [http://beta.openstack.org/doc/governance/hosts.html#openstack-to-jobs](#)
[Rally](#) ([http://rally.readthedocs.org/en/latest/](#))
[Documentation](#) ([http://docs.openstack.org](#))

[Report a bug](#)

[Ask a question](#)

[Help translate](#)

[Register & blueprint](#)

Get involved

[Report a bug](#)

[Ask a question](#)

[Help translate](#)

[Register & blueprint](#)

Announcements

[Submit Feature requests](#) and
bug track has been moved to
[Storyboard](#) on 2014-08-01
[https://storyboard.openstack.org](#)

[100% related to feature on 2014-08-01](#)

A few days ago the infra team enabled this in the Storyboard interface.

[OpenStack project is migrating to Storyboard](#) on 2014-08-01

As part of the OpenStack transition, we have migrated bugs to Storyboard.

[Trunk 3.0 release \(DevStack\)](#) on 2014-08-02

This release is the first dedicated for enhancing automation at 2014 Neuton in ...

Project group information

[Metaphorians](#) [Dilect](#)

[OpenStack Administrators](#) Not yet selected

[Bug tracker](#)

None specified

[Download EPEL metadata](#)

FAQs for OpenStack

[All FAQs](#)

[How to use open glance multi-object storage](#)

[Request for the project images for hierarchical multi-hierarchy projects](#)

[Search](#)

Storyboard によるプロジェクト管理 - StoryBoard とは？

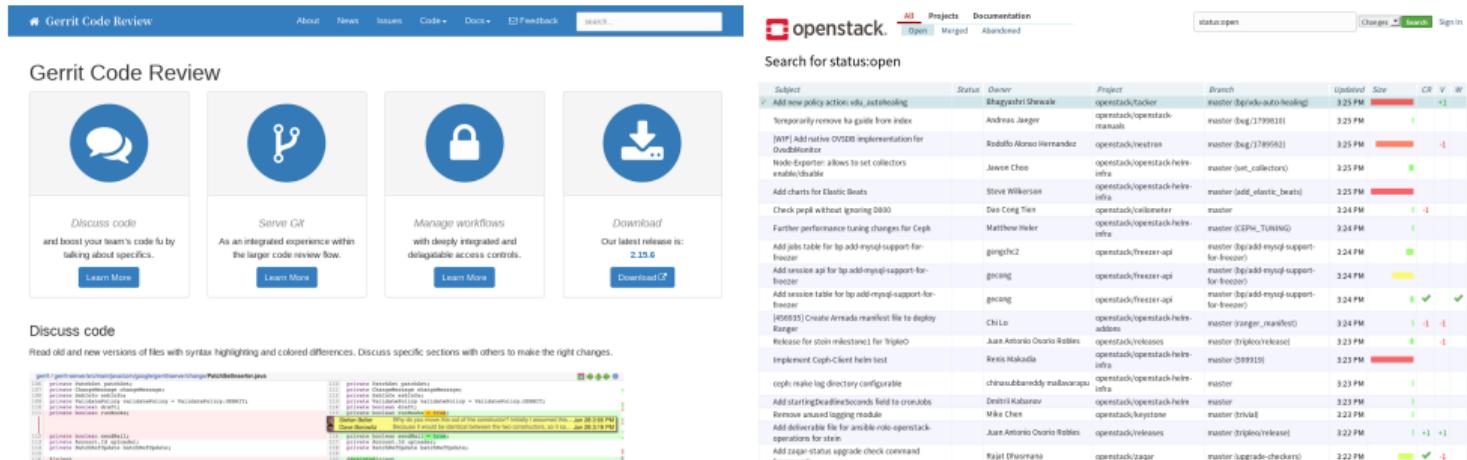
- ▶ OpenStack開発の標準タスク管理（≒バグ管理）ツール
- ▶ スクラッチ作成
- ▶ アーキテクチャ（Frontend: JS/Angular, Backend: Python/Pecan）
- ▶ 100% open source (Apache2.0)

The screenshot shows the StoryBoard application interface. The left sidebar has navigation links: Search, Dashboard, Worklists & Boards, Project Groups, Projects (which is selected), and Stories. The main area displays a list of tasks for the project 'openstack-infra/storyboard'. The tasks are listed in a table with columns for ID, Description, Status, and Actions. The 'Active' tab is selected in the filter bar at the top of the list.

| ID | Description | Status | Action |
|---------|---|--------|--------|
| 2004103 | unable to install mariadb on multinode architecture | Active | ☆ |
| 2004098 | Create New fails to create stories | Active | ☆ |
| 2004097 | story lists in project view should only show stories with active tasks for that project | Active | ☆ |
| 2003944 | Auto populate assignee to task when review is pushed | Active | ☆ |
| 2003886 | Project Group Descriptions | Active | ☆ |
| 2003719 | BUG: Card links don't work in boards | Active | ☆ |
| 2003701 | Mixed Story & Task Automatic Worklist Error | Active | ☆ |
| 2003698 | Feature Request: Enforce flavor extended parameters | Active | ☆ |
| 2003663 | Browsing tasks on the search view sometimes gives an error | Active | ☆ |
| 2003554 | Unicode issue with (at least) reporter names in migration from Launchpad | Active | ☆ |

Gerrit レビューシステム - Gerrit とは？

- ▶ Android 開発にて利用されている
- ▶ 開発言語： Java
- ▶ 100% open source
- ▶ Pull Request 方式ではなく、中央リポジトリにパッチをレビューし、マージしていく
- ▶ ターミナルで動作するクライアントもあります > Gertyt:
<https://gertyt.readthedocs.io/>



The screenshot shows the Gerrit Code Review interface. At the top, there's a navigation bar with links for About, News, Issues, Code, Docs, Feedback, and a search bar. Below the navigation is a main header for "Gerrit Code Review". The main content area has four large cards: "Discuss code" (with a speech bubble icon), "Serve GR" (with a person icon), "Manage workflows" (with a lock icon), and "Download" (with a download icon). Below these cards is a section titled "Discuss code" with a sub-section "Read old and new versions of files with syntax highlighting and colored differences. Discuss specific sections with others to make the right changes." At the bottom, there's a detailed view of a pull request with a commit log and a "Review-Queue" button.

Search for status:open

| Subject | Status | Owner | Project | Branch | Updated | Size | CR | V | W |
|---|--------|----------------------------|---------------------------------|--|---------|---------|----|---|---|
| Add new policy action vifz_autohealing | Open | BhagyaShivale | openstack/tacker | master (bp/edu-auto-healing) | 3:25 PM | 3.25 MB | 1 | 1 | 0 |
| Temporarily remove ha guide from index | Merged | Andreas Jaeger | openstack/openstack-manuals | master (bg/179931ff) | 3:23 PM | 3.23 MB | 1 | 1 | 0 |
| [WIP] Add native OVSDB implementation for Open vSwitch | Open | Rodolfo Alonso Hernandez | openstack/nexentis | master (bg/179956ff) | 3:25 PM | 3.25 MB | 1 | 1 | 0 |
| Node Exporter: allows to set collectors enable/disable | Open | Jawon Choo | openstack/openstack-helph-infra | master (set_collectors) | 3:25 PM | 3.25 MB | 1 | 1 | 0 |
| Add charts for Elastic Beats | Open | Steve Wilkerson | openstack/openstack-helph-infra | master (add_elastic_beats) | 3:25 PM | 3.25 MB | 1 | 1 | 0 |
| Check pep8 without ignoring D400 | Merged | Dan Clegg Tien | openstack/cronometer | master | 3:24 PM | 3.24 MB | 1 | 1 | 0 |
| Further performance tuning changes for Ceph | Open | Matthew Heiner | openstack/openstack-helph-infra | master (CEPH_TUNING) | 3:24 PM | 3.24 MB | 1 | 1 | 0 |
| Add jobs table for bp/add-myosig-support-for-freezer | Open | gengch2 | openstack/freezer-api | master (bp/add-myosig-support-for-freezer) | 3:24 PM | 3.24 MB | 1 | 1 | 0 |
| Add session api for bp/add-myosig-support-for-freezer | Open | gengch2 | openstack/freezer-api | master (bp/add-myosig-support-for-freezer) | 3:24 PM | 3.24 MB | 1 | 1 | 0 |
| Add session table for bp/add-myosig-support-for-freezer | Open | gengch2 | openstack/freezer-api | master (bp/add-myosig-support-for-freezer) | 3:24 PM | 3.24 MB | 1 | 1 | 0 |
| [4606935] Create Araneida manifest file to deploy Rangar | Open | Chi Lo | openstack/openstack-helph-infra | master (ranger_manifest) | 3:24 PM | 3.24 MB | 1 | 1 | 0 |
| Release for Stein instance1 for tripleO | Open | Juan Antonio Osorio Robles | openstack/releases | master (tripleo/release) | 3:23 PM | 3.23 MB | 1 | 1 | 0 |
| Implement Ceph-Client helm test | Open | Iveis Makadula | openstack/openstack-helph-infra | master (59991ff) | 3:23 PM | 3.23 MB | 1 | 1 | 0 |
| ceph: make log directory configurable | Open | chrishasubramanyam | openstack/openstack-helph-infra | master | 3:23 PM | 3.23 MB | 1 | 1 | 0 |
| Add startingDeadlineSeconds field to cronJobs | Open | Dmitri Kuznetsov | openstack/tacker-helpt | master | 3:23 PM | 3.23 MB | 1 | 1 | 0 |
| Openstack: add support for validation module | Open | Mike Chen | openstack/kayytune | master (trivial) | 3:23 PM | 3.23 MB | 1 | 1 | 0 |
| Add deliverables file for ansible-role-openstack-operations for stein | Open | Juan Antonio Osorio Robles | openstack/releases | master (tripleo/release) | 3:22 PM | 3.22 MB | 1 | 1 | 1 |
| Add zaga status upgrade check command | Open | Rajat Dharmena | openstack/zaga | master (upgrade-checkers) | 3:22 PM | 3.22 MB | 1 | 1 | 0 |

参考：Gerty - Gerrit レビューシステム

- ▶ ターミナルで動作するクライアント
- ▶ <https://gerty.readthedocs.io/>
- ▶ デモ

File Edit View Bookmarks Settings Help

Unreviewed 51 changes in openstack/tempest Error Sync: 0

| Number | Subject | Branch | Topic | Owner | Updated | Size | C | V | W |
|--------|--|--------|----------------------|---------------------|------------|------|---|---|---|
| 570287 | Deprecate available filters in favor of enabled | master | bug/1628443 | Arton Llfshitz | 2018-10-24 | 1 | 1 | 1 | 1 |
| 549111 | Add test test_create_server_with_bdm_source_image | master | bdm_image | zhufl | 2018-10-24 | 1 | 1 | 1 | 1 |
| 602981 | Update REVIEWING docs with fast-track approval process | master | reviewing | Felipe Montelro | 2018-10-24 | 1 | 1 | 1 | 1 |
| 612277 | [Negative] Extend volume over quota limit | master | extend_volume_negati | Liron Kuchlani | 2018-10-23 | 1 | 1 | 1 | 1 |
| 588120 | Set max microversion 2.35 for nova floatingip and securitygroup | master | bp/clear-deprecated- | zhufl | 2018-10-23 | 2 | 1 | 1 | 1 |
| 611068 | Make connectivity test less backend dependent | master | bug/1798317 | Lucas Alvares Gomes | 2018-10-23 | 1 | 1 | 1 | 1 |
| 523935 | Add profiler support into Tempest | master | profiler | Ilya Shakhat | 2018-10-23 | 1 | 1 | 1 | 1 |
| 602415 | Use tempest run command directly for full job | master | use-tempest-run | Masayuki Igawa | 2018-10-22 | 1 | 1 | 1 | 1 |
| 560073 | Forbid oslo.log to write to STDOUT | master | bug/1764375 | Federico Rossi | 2018-10-19 | 1 | 1 | 1 | 1 |
| 606909 | Adding missing test case of account generator resources | master | 606880 | Manik Bindlish | 2018-10-18 | 2 | 1 | 1 | 1 |
| 609644 | Add response schema validation for volume limits | master | bp/volume-response-s | zhufl | 2018-10-18 | 1 | 1 | 1 | 1 |
| 608706 | Add ipv6 tempest jobs | master | ipv6job | Antonio Ojea | 2018-10-17 | 1 | 1 | 1 | 1 |
| 587748 | Adding missing test cases in "test_run.py" | master | bp/tempest-cli-unit- | Manik Bindlish | 2018-10-17 | 1 | 1 | 1 | 1 |
| 594037 | Add testcase for getting hypervisor servers in 2.53 | master | hypervisor-252 | zhufl | 2018-10-16 | 1 | 1 | 1 | 1 |
| 600921 | Add response schema validation for snapshot manage | master | bp/volume-response-s | zhufl | 2018-10-13 | 1 | 1 | 1 | 1 |
| 605600 | Add response schema validation for volume quota classes | master | bp/volume-response-s | zhufl | 2018-10-13 | 1 | 1 | 1 | 1 |
| 609624 | Add response schema validation for volume snapshots | master | bp/volume-response-s | zhufl | 2018-10-12 | 1 | 1 | 1 | 1 |
| 606809 | Add response schema validation for encryption types | master | bp/volume-response-s | zhufl | 2018-10-12 | 1 | 1 | 1 | 1 |
| 608875 | Add response schema validation for volume manage | master | bp/volume-response-s | zhufl | 2018-10-12 | 1 | 1 | 1 | 1 |
| 534250 | Check network connectivity of the instance before and after live migration | master | scenario.live_migrat | Liang Hao | 2018-10-11 | 1 | 1 | 1 | 1 |
| 608898 | Add response schema validation for volume transfer | master | bp/volume-response-s | zhufl | 2018-10-11 | 1 | 1 | 1 | 1 |
| 605595 | Add response schema validation for volume extensions | master | bp/volume-response-s | zhufl | 2018-10-10 | 2 | 1 | 1 | 1 |
| 605985 | Add response schema validation for volume types | master | bp/volume-response-s | zhufl | 2018-10-10 | 1 | 1 | 1 | 1 |
| 606772 | Add response schema validation for volume group snapshots | master | bp/volume-response-s | zhufl | 2018-10-10 | 1 | 1 | 1 | 1 |
| 603339 | Add response schema validation for volume quota set | master | bp/volume-response-s | zhufl | 2018-10-10 | 1 | 1 | 1 | 1 |
| 605917 | Add response schema validation for volume pools | master | bp/volume-response-s | zhufl | 2018-10-09 | 1 | 1 | 1 | 1 |
| 606328 | Add response schema validation for volume groups | master | bp/volume-response-s | zhufl | 2018-10-09 | 1 | 1 | 1 | 1 |
| 606244 | Add response schema validation for volume group types | master | bp/volume-response-s | zhufl | 2018-10-08 | 1 | 1 | 1 | 1 |
| 603580 | Add response schema validation for volume messages | master | bp/volume-response-s | zhufl | 2018-10-08 | 1 | 1 | 1 | 1 |
| 605574 | Add response schema validation for volume capabilities | master | bp/volume-response-s | zhufl | 2018-10-08 | 1 | 1 | 1 | 1 |
| 589279 | Immutable user source: test_llst_users | master | bug/1777847 | Anna Pankiewicz | 2018-10-05 | 1 | 1 | 1 | 1 |
| 587878 | Immutable user source: test_credentials | master | bug/1777847 | Anna Pankiewicz | 2018-09-27 | 1 | 1 | 1 | 1 |
| 588393 | Immutable user source: test_default_project_id | master | bug/1777847 | Anna Pankiewicz | 2018-09-27 | 1 | 1 | 1 | 1 |
| 588395 | Immutable user source: test_users_negative | master | bug/1777847 | Anna Pankiewicz | 2018-09-27 | 1 | 1 | 1 | 1 |
| 607726 | Use system creds for system operations | master | system-creds | Jamie Lennox | 2018-09-25 | 1 | 1 | 1 | 1 |
| 384528 | Adds protocol options for test_cross_tenant_traffic | master | bug/1363986 | Claudiu Belu | 2018-09-20 | 2 | 1 | 1 | 1 |
| 603295 | Add response schema validation for volume hosts | master | bp/volume-response-s | zhufl | 2018-09-20 | 1 | 1 | 1 | 1 |

↳ Subscribed projects

Zuulによる継続的インテグレーション - Zuulとは？

- ▶ 自動テストによるゲートを設けて、常に正しく動作するコードのみがマージされるようとする
- ▶ AnsibleによるCI/CD
- ▶ プロジェクトをまたがった依存関係もテストすることができる

ZUUL

Status Jobs Builds

Queue lengths: 0 events, 0 management events, 0 results.

change or project name Expand by default:

Documentation Tenant openstack

refresh auto reload

check [118]

Newly uploaded patchsets enter this pipeline to receive an initial +/−1 Verified vote.

Queue: [openstack/tripleo-heat-templates](#)

- openstack/tripleo-heat-templates
612249.1
- openstack/tripleo-heat-templates
612316.1
- openstack/tripleo-heat-templates
612601.1
- openstack/tripleo-heat-templates
612602.1 0 min 3 hr 51 min

gate [16]

Changes that have been approved by core reviewers are enqueued in order in this pipeline, and if they pass tests, will be merged. For documentation on how getting with Zuul works, please see <https://zuul-ci.org/docs/zuul/user/getting.html>

Queue: tripleo

- openstack/tripleo-quickstart-extras
609550.3 15 min 2 hr 39 min
- openstack/tripleo-quickstart
612289.1 25 min 2 hr 5 min
- openstack/tripleo-heat-templates
611309.3 2 hr 20 min 46 min

post [0]

This pipeline runs jobs that operate after each change is merged. Queue items are identified by the abbreviated hash (git log --format=%h) of the merge commit.

promote [0]

This pipeline runs jobs that operate after each change is merged in order to promote artifacts generated in the gate pipeline.

pre-release [0]

When a commit is tagged with a pre-release tag, this pipeline runs jobs that publish archives and documentation.

release [0]

When a commit is tagged as a release, this pipeline runs jobs that publish archives and documentation.

periodic [0]

Jobs in this queue are triggered on a timer.

release-post [0]

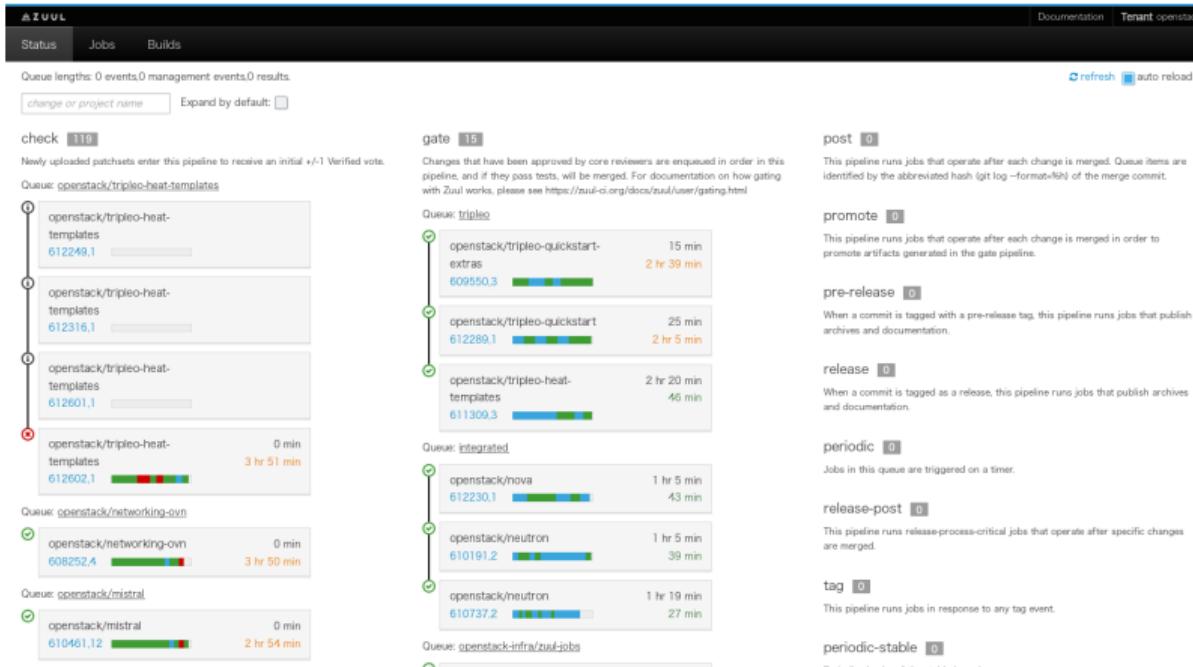
This pipeline runs release-process-critical jobs that operate after specific changes are merged.

tag [0]

This pipeline runs jobs in response to any tag event.

periodic-stable [0]

Periodic checks of the stable branch



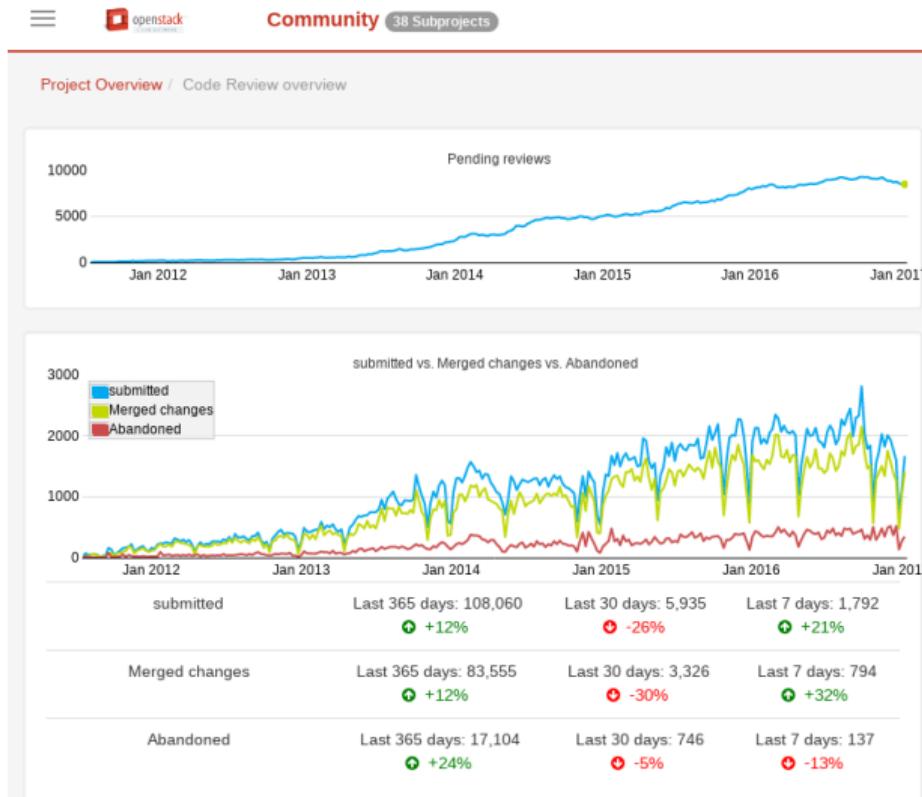
開発裏話

1. パッチがなかなかマージされない！その理由とは？
2. 不安定なCI
3. コミュニケーションスキル・英語(世界標準)の重要性

1. パッチがなかなかマージされない！その理由とは？ - 開発裏話

- ▶ プロジェクト規模≒ステークホルダの数
- ▶ コミュニケーション不足
- ▶ レビュー者数の不足

1. (続き) その理由とは? - レビュー者数の不足



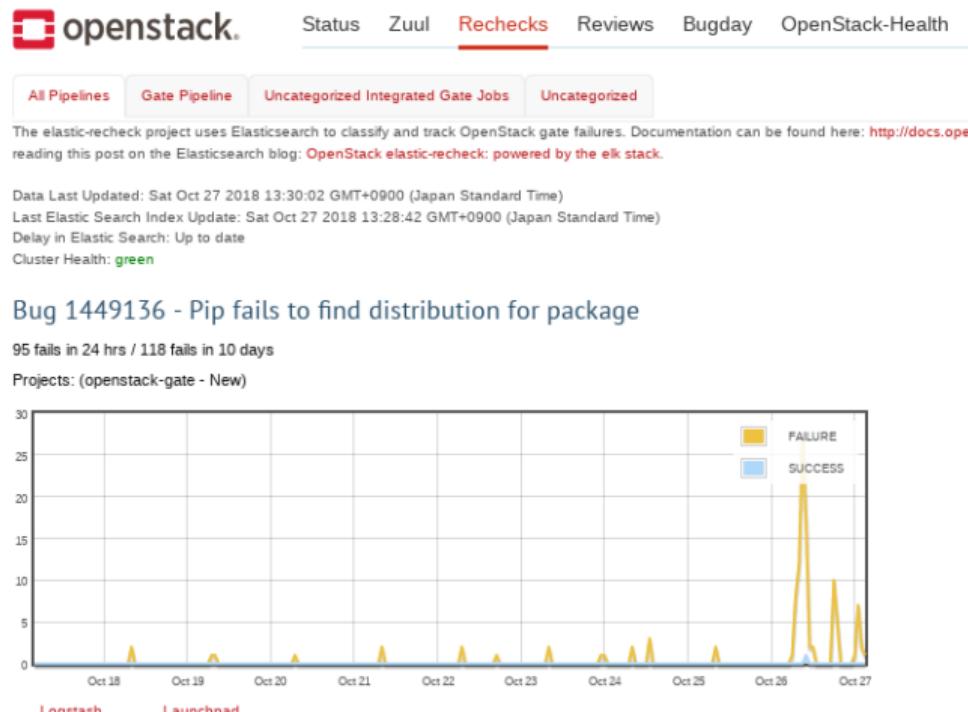
<http://activity.openstack.org/dash/browser/scr.html>

2. 不安定なCI - 開発裏話

- ▶ CIで動いてないものは腐ってくる
- ▶ CIも完璧ではない
- ▶ 迅速な対応が必要

2. 不安定なCI (続き) - Elastic Recheck

Bugとの関連付けをログファイルのシグネチャと紐付けて自動的に！



<http://status.openstack.org/elastic-recheck/>

3. コミュニケーションスキル・英語(世界標準)の重要性 - 開発裏話

- ▶ 議論
- ▶ 職探し（日本で開発者(プログラマ)職困難）
- ▶ 楽しさ（健康には気をつけましょう！（笑））

Masayuki Igawa @ ●
@masayukig

#aftersoc #afterstack #OpenStackSummit
#openstack #suse



1:45 PM - 26 May 2018

12 Likes

1 12 由

Kendall Nelson
@knelson92

Following

Kicking off the #OpenStackSummit early with #OpenStackUpstreamInstitute! 19 attendees and 14 mentors made it today :)
@tonybreeds @jungleboyj @ldikoVancsa @vkmc @kmarc @marton_kiss @spotzz_ @ghanshyammann @masayukig



6:59 AM - 20 May 2018

7 Retweets 31 Likes

1 7 31

Conclusion

- ▶ Gerrit, StoryBoard, Zuul 等様々なOSSは、オープンソース開発以外でも利用可能です！
- ▶ 英語重要
- ▶ OSS 開発は（大変なこともあるけど）楽しい！皆さん参加しましょう！

Appendix

- ▶ Slides: <http://bit.ly/osc-2018fall-oss>
- ▶ Contact info: masayukig on [Freenode](#), [GitHub](#), [Twitter](#), [LinkedIn](#)
- ▶ StoryBoad:
<https://docs.openstack.org/infra/system-config/storyboard.html>
- ▶ Gerrit: <https://www.gerritcodereview.com/>
- ▶ Zuul: <https://zuul-ci.org/>
- ▶ Non-native English speakers in Open Source communities:
<http://bit.ly/esl-yvr>