

How to Participate Open Source development

- Open Source development tooling and community in the upstream -

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Freenode GitHub Twitter LinkedIn

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@openSUSE.Asia Summit 2019

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

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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

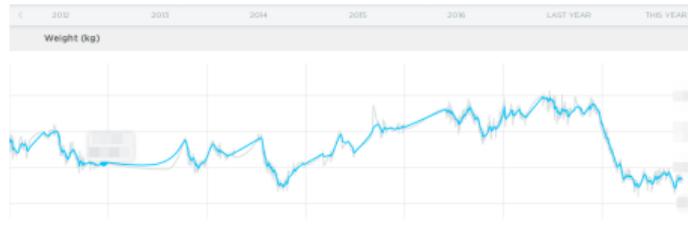
These slides are my own opinion

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.

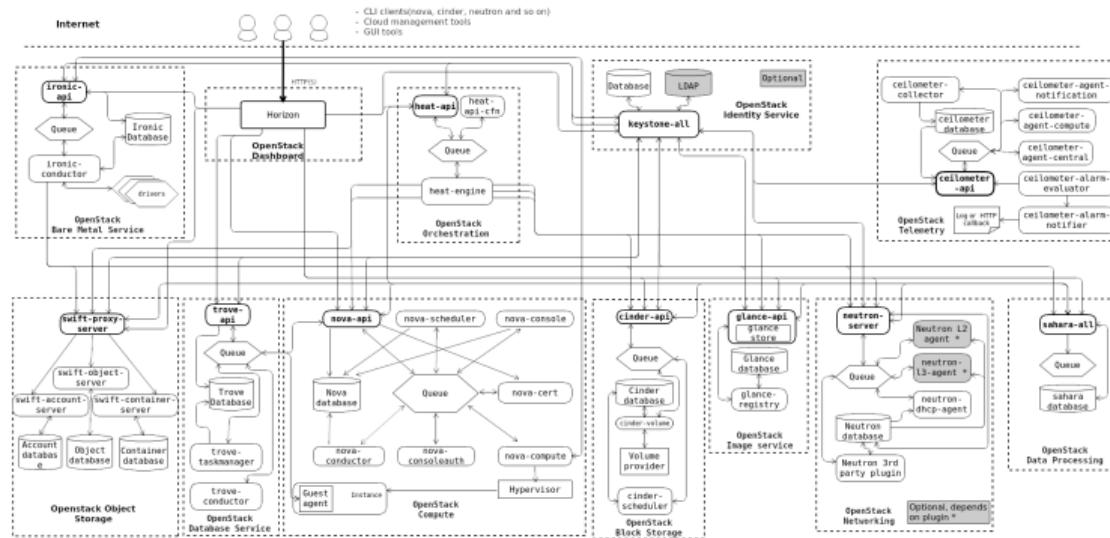


Goal of today

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

"OpenStack" とは?

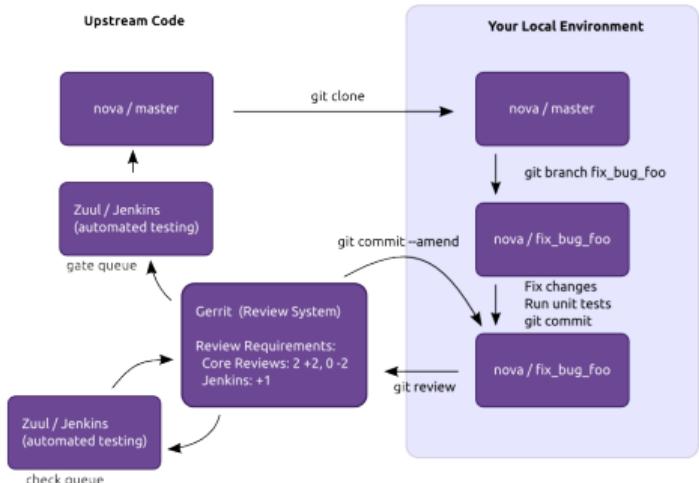
- ▶ Open Source Cloud Operation System: Apache License Version 2.0
- ▶ Written in Python
- ▶ There are a lot of 'OpenStack' projects: [63 projects\(2018-10-23\)](https://www.openstack.org/user-stories/)
- ▶ Released every 6 month: Latest version is called 'Queens'
- ▶ Users: AT&T, AA, BBVA, Bloomberg,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

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 brasseur, 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!	Believe it or not, this 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, or to subscribe, unsubscribe, and change the preferences on your subscription. To visit the general information page for an unauthenticated list, open a URL similar to this one, but with a '?' and the list name appended.
List administrators, you can visit the list admin's 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-cert.org	(no description available)
App-catalog-admins	(no description available)
Ceph-devel	The Ceph-devel mailing list is the main contact point for anybody managing a local OpenStack Group.
Icehouse-translation	(no description available)
Enterprise.org	(no description available)
Reproduction	The Enterprise work group
Reproduction-board	General discussion list for activities on the OpenStack Foundation
Reproduction-testing	OpenStack Foundation Board of Directors
Testing-mg	working group to set the openstack foundation testing standards for drivers not drivers
Icinga-mg	Interop 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	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

[spinnaker](#) OpenStack [Log In / Register](#)

[Dashboard](#) [Code](#) [Pugs](#) [Blueprints](#) [Translations](#) [Answers](#)

Reported 2014-07-16 by [Perry Heiter](#)

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.

Motivation - <https://openstack.org>
Wiki - <https://wikicloud.openstack.org>
Mailing List - lists@openstack.org
Bugding List - <https://bugzilla.openstack.org/> see <http://Rita.openstack.org/tiki/list/milestones>
Code Review - <https://review.openstack.org/>
IRC - <irc://irc.freenode.net/openstack>
Documentation - <http://User:OpenStack.org>

[Get Involved](#)

[Report a bug](#) [Ask a question](#) [Help translate](#) [Register a blueprint](#)

Announcements [RSS](#)

[String feature requests and bug reports have been moved to Storyboard on 2014-06-23](#) <https://Storyboard.openstack.org/> [#storyboard](#)

[100+ valid to review on 2014-07-16](#)

A few days ago the rita Team enabled Vito in Gerrit. Many thanks to everyone.

Official project statistics [2017-08-06](#)

As part of the OpenStack Initiative, we have integrated [https://Metrics.openstack.org](#)

Trunk 10.0.0 release (Devstack) [an 09/14/2017](#)

This release has been dedicated for enhancing automation across Neutron in ...

FAQs for OpenStack [All FAQs](#) [Search](#)

Up How to use curl glance-malibti-object-create
Up Report for the project: Images For Networked multi-tiered projects

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

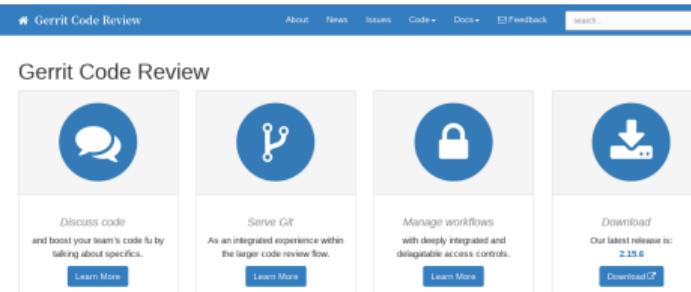
- ▶ OpenStack開発の標準タスク管理（≒バグ管理）ツール
- ▶ スクラッチ作成
- ▶ アーキテクチャ（Frontend: JS/Angular, Backend: Python/Pecan）
- ▶ 100% open source (Apache2.0)

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/>



Gerrit Code Review

About News Issues Code+ Docs+ Feedback search...

openstack. Projects Open Merged Abandoned

status:open Changes Search Sign In

Search for status:open

Subject	Status	Owner	Project	Branch	Updated	Size	CR	V	W
Add new policy action vif1_autohealing	in progress	BhagyaShivale	openstack/factory	master (bp/edu-auto-healing)	3:25 PM	1.0 KB	1	0	0
Temporarily remove ha guide from index	in progress	Andreas Jaeger	openstack/openstack-manuals	master (bg/179931ff)	3:23 PM	1.0 KB	1	0	0
[WIP] Add native OVSDB implementation for Open vSwitch	in progress	Rodolfo Alonso Hernandez	openstack/nexstar	master (bg/179956ff)	3:25 PM	1.0 KB	1	0	0
Node Exporter: allows to set collectors enable/disable	in progress	Jawon Choo	openstack/openstack-helph-infra	master (set_collectors)	3:25 PM	1.0 KB	1	0	0
Add charts for Elastic Beats	in progress	Steve Wilkerson	openstack/openstack-helph-infra	master (add_elastic_beats)	3:25 PM	1.0 KB	1	0	0
Check pep8 without ignoring D400	in progress	Dan Clegg Tien	openstack/cronometer	master	3:24 PM	1.0 KB	-1	0	0
Further performance tuning changes for Ceph	in progress	Matthew Heiner	openstack/openstack-helph-infra	master (CEPH_7_TUNING)	3:24 PM	1.0 KB	1	0	0
Add jobs table for bp/add-myosig-support-for-freezer	in progress	gengch2	openstack/freezer-api	master (bp/add-myosig-support-for-freezer)	3:24 PM	1.0 KB	1	0	0
Add session api for bp/add-myosig-support-for-freezer	in progress	gengch2	openstack/freezer-api	master (bp/add-myosig-support-for-freezer)	3:24 PM	1.0 KB	1	0	0
Add session table for bp/add-myosig-support-for-freezer	in progress	gengch2	openstack/freezer-api	master (bp/add-myosig-support-for-freezer)	3:24 PM	1.0 KB	1	0	0
[4606935] Create Araneida manifest file to deploy Range	in progress	Chi Lo	openstack/openstack-helph-admins	master (zinger_manifest)	3:24 PM	1.0 KB	-1	-1	0
Release for Stein instance1 for tripleO	in progress	Juan Antonio Osorio Robles	openstack/releases	master (tripleo/release)	3:23 PM	1.0 KB	1	-1	0
Implement Ceph-Client helm test	in progress	Irene Maekawa	openstack/openstack-helph-infra	master (59991ff)	3:23 PM	1.0 KB	1	0	0
ceph: make log directory configurable	in progress	chirantanabhanu.mutharapu	openstack/openstack-helph-infra	master	3:23 PM	1.0 KB	1	0	0
Add startingDeadlineSeconds field to cronJobs	in progress	Dmitri Kuznetsov	openstack/openstack-helph-infra	master	3:23 PM	1.0 KB	1	0	0
Openstack: add ceph module	in progress	Mike Chen	openstack/kayytune	master (trivial)	3:23 PM	1.0 KB	1	0	0
Add deliverables fix for ansible-role-openstack-operations for stein	in progress	Juan Antonio Osorio Robles	openstack/releases	master (tripleo/release)	3:22 PM	1.0 KB	1	1	1
Add zager status upgrade check command	in progress	Rajat Dharmena	openstack/zager	master (upgrade-checkers)	3:22 PM	1.0 KB	1	0	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 Ressi	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:

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.

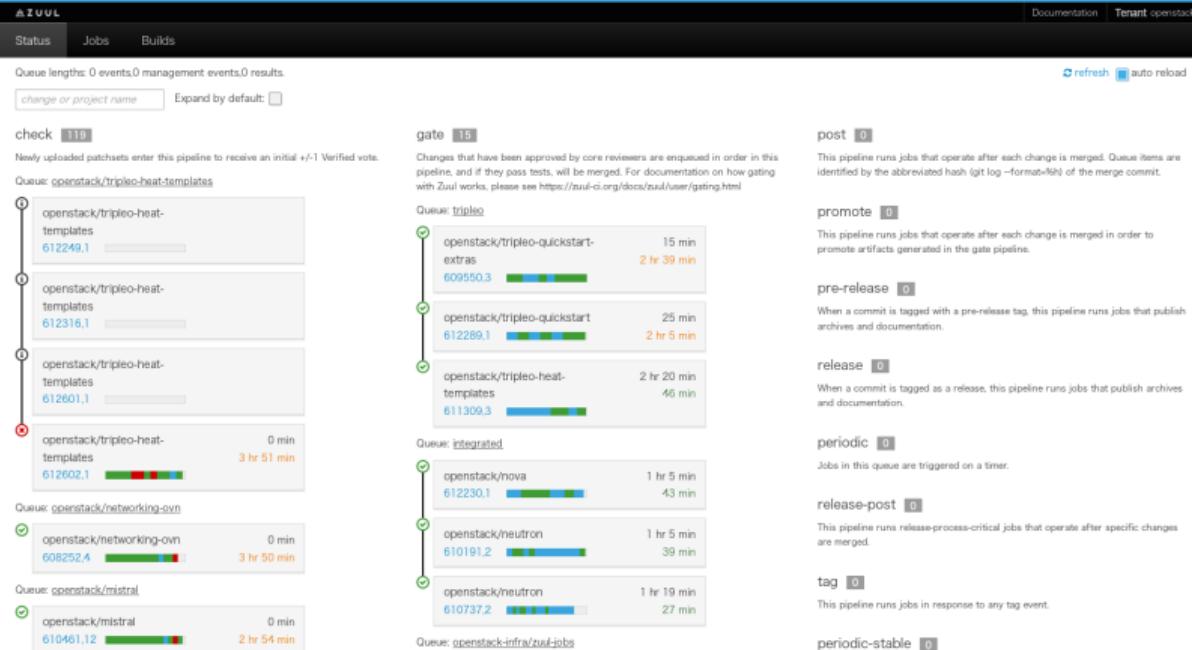
release-post [0]
This pipeline runs release-process-critical jobs that operate after specific changes are merged.

tag [0]
This pipeline runs jobs in response to any tag event.

periodic-stable [0]
Periodic checks of the stable branch

Documentation Tenant: openstack

refresh auto reload



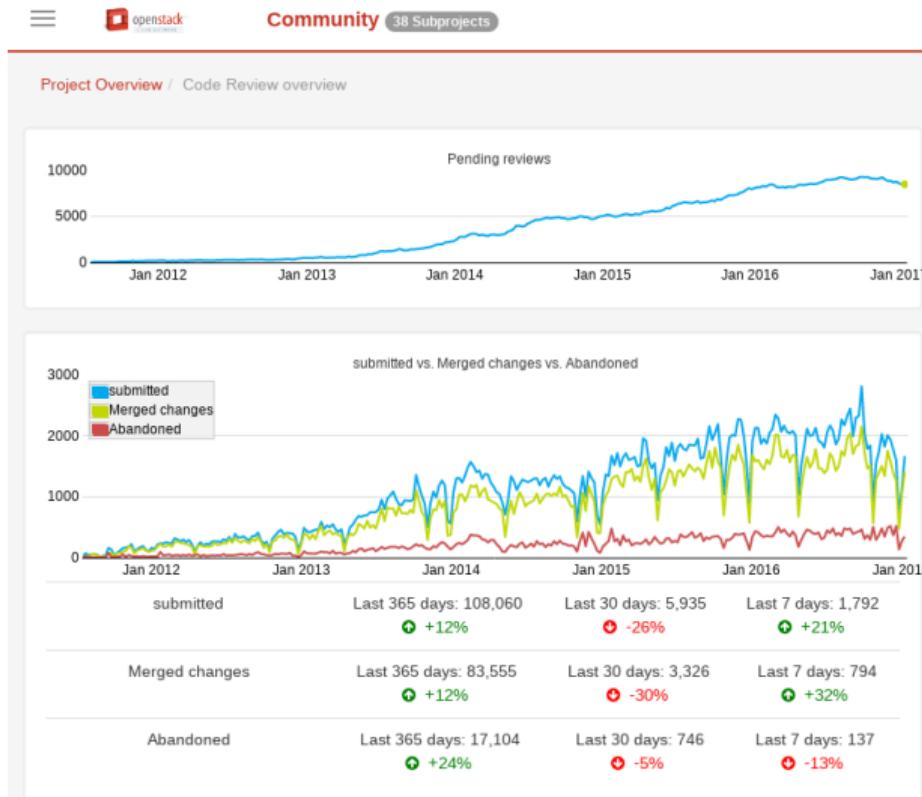
開発裏話

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>