



# OpenStack アップストリーム開発者が語る、 オープンソース開発の裏話

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masayukig on Freenode, GitHub, Twitter, LinkedIn

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@オープンソースカンファレンス 2018 Tokyo/Fall  
<http://bit.ly/osc-2018fall-upstream>,

# Agenda

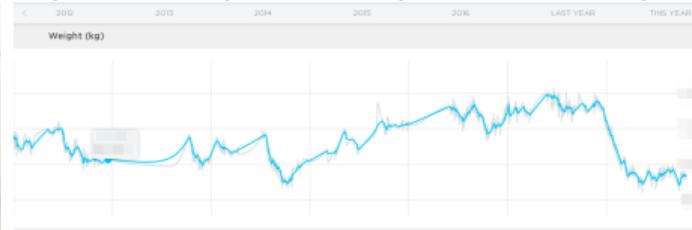
1. 自己紹介
2. 今日のゴール
3. OpenStack とは？
4. 開発ワークフロー
5. コミュニケーションツール
6. StoryBoard によるプロジェクト管理
7. Gerrit によるレビュー
8. Zuul による継続的インテグレーション
9. 開発裏話
10. まとめ

## DISCLAIMER

この内容は個人の見解であり、所属する組織・団体を代表するものではありません。

# Who I am?

- ▶ 所属企業：1998.4-2015.12 Traditional IT company in Japan, 2016.1-2017.3 HPE  
-> 2017.3- SUSE/Novell Japan -> 2019 ??? ("Further Independence for SUSE")
  - ▶ SUSE OpenStack Cloud QE(Quality Engineering) Team (日本人私一人だけ)  
"SUSE Acquires OpenStack IaaS and CF PaaS Talent and Tech Assets from HPE ..."
- ▶ 仕事/肩書: Senior Software Engineer/Open Source Programmer (海外出張)
  - ▶ OpenStack QA Up/Downstream development, Core Reviewer  
(Tempest, OpenStack-Health, Subunit2SQL, Stackviz)
  - ▶ [stackalytics.com/?user\\_id=igawa](http://stackalytics.com/?user_id=igawa), [github.com/masayukig](https://github.com/masayukig)
- ▶ Books 
  - ▶ OpenStack Cloud Integration (OpenStack クラウドインテグレーション)
  - ▶ Infra CI Pragmatic Guide - Ansible/GitLab (インフラ CI 実践ガイド) (as a reviewer)
- ▶ Hobby: Bike(BMC SLR02), Diet(Low-carb), Clouds(OpenStack...), etc.

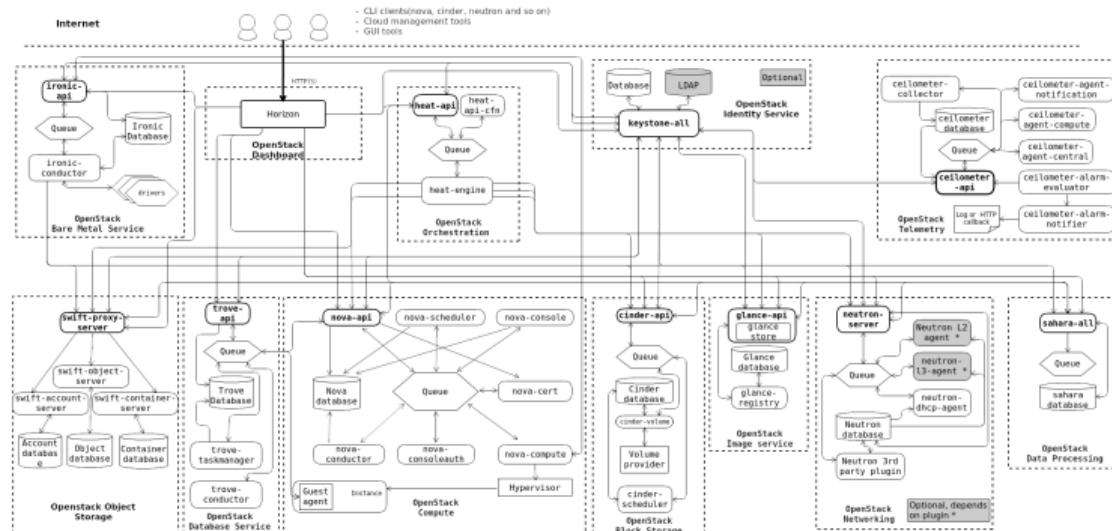


# 今日のゴール

- ▶ OpenStack/OSS 開発手法・使われているツールを理解(ざっくりと)
- ▶ OSS開発のハマりどころ・面白さを理解

# "OpenStack" とは?

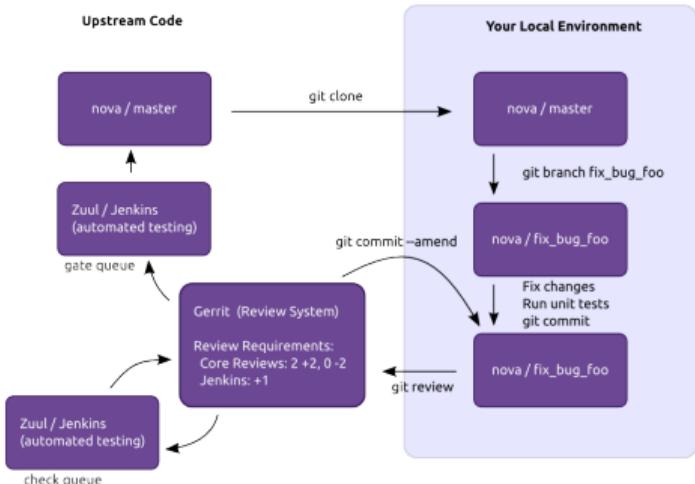
- Open Source Cloud Operation System: Apache License Version 2.0
- Written in Python
- There are a lot of 'OpenStack' projects: [63 projects\(2018-10-23\)](https://www.openstack.org/user-stories/)
- Released every 6 month: Latest version is called 'Queens'
- Users: AT&T, AA, BBVA, Bloomberg, CERN, China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

The screenshot shows the freeNode homepage. At the top left is the "freeNode" logo. To its right is a search bar with the placeholder "Search using Google". On the far right, there's a "Log In" button with a user icon and a "PM" button with a gear icon. The main title "Welcome to freeNode — supporting free and open source communities since 1998" is centered above three dark grey call-to-action buttons. The first button on the left contains a speech bubble icon and the word "Chat". The middle button contains a group of people icon and the text "Register a group". The third button on the right contains a question mark icon and the text "Knowledge Base".

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

A little over a month from now, the second freenode #live will take place at We 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 #live

Other exhibitions at this year's event will be the returning main sponsor, **Private Internet Access**, as well as the Free Software Foundation, OpenSUSE, Minetest, Linux Mint, and many more.

**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, or to subscribe, unsubscribe, and change the preferences per 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 <a href="#">list admin overview page</a> to find the management interface for your list.	
If you are having trouble using the lists, please contact <a href="mailto:support@lists.openstack.org">support@lists.openstack.org</a> .	
List	Description
<a href="#">Admins-test.org</a>	[no description available]
<a href="#">App-catalog-admins</a>	[no description available]
<a href="#">Ceph-operators</a>	The Ceph Operators mailing list is the main contact point for anyone managing a local OpenStack Group.
<a href="#">Heat-compling</a>	[no description available]
<a href="#">Horizon-testing</a>	[no description available]
<a href="#">Enterprise.org</a>	The Enterprise work group
<a href="#">Headquarters</a>	General discussions for all activities of the OpenStack Foundation
<a href="#">Headquarters-board</a>	OpenStack Foundation Board of Directors
<a href="#">Headquarters-testing</a>	working group to set the openstack Foundation testing standards for business not drivers
<a href="#">Icinga-ug</a>	Interop Working Group Mailing List
<a href="#">Influxdb-ug</a>	Discussions on InfluxDB matters related to the project
<a href="#">Marketing</a>	The OpenStack Marketing list is the means to facilitate discussion and best practice sharing among marketers and event organizers in the OpenStack community.
<a href="#">Openstack-announce</a>	[no description available]
<a href="#">Openstack-ug-committers</a>	Key announcements about OpenStack & Security advisories
<a href="#">Openstack-ug-committers</a>	[no description available]
<a href="#">Openstack-ug-testers</a>	The team responsible to write content for openstack.org domain
<a href="#">openstack-de</a>	List for German speaking OpenStack users



# OpenStack

OpenStack is a cloud computing platform that provides a unified interface to distributed systems and network resources. It is designed to handle the management of large clusters of compute, storage, and networking resources in a highly reliable, available, and scalable manner.

The OpenStack Open Source Cloud Mission is 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.

Website: <http://www.openstack.org>  
Wiki: <http://wiki.openstack.org>  
Mailing List: [lists.openstack.org](mailto:lists.openstack.org)  
Bugding List: <http://openstack.bugs.launchpad.net> - see <https://bugs.launchpad.net/openstack/+bug/1000000>  
IRC: #openstack on freenode.net  
Documentation: <http://docs.openstack.org>

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

## Get Involved

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

## Announcements

[Quinton Fletcher requests bug fixes have been moved to Keystone](#) on 2014-02-03  
[https://blueprints.launchpad.net/keystone/+spec/move-bug-fixes](#)

[Tobias Schaefer requests bug fixes have been moved to keystone](#) on 2014-02-03  
[https://blueprints.launchpad.net/keystone/+spec/move-bug-fixes](#)

[Dmitry Kozhevnikov requests bug fixes have been moved to keystone](#) on 2014-02-03  
[https://blueprints.launchpad.net/keystone/+spec/move-bug-fixes](#)

[Tobias Schaefer requests bug fixes have been moved to keystone](#) on 2014-02-03  
[https://blueprints.launchpad.net/keystone/+spec/move-bug-fixes](#)

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[Tobias Schaefer requests bug fixes have been moved to keystone](#) on 2014-02-03  
[https://blueprints.launchpad.net/keystone/+spec/move-bug-fixes](#)

## Project group information

[Dashboard](#) [Blueprints](#) [Bugs](#) [Translations](#) [Answers](#)

[OpenStack Administrators](#) Not yet selected

[Bug tracker](#)  
None specified

[Download ESM metadata](#)

## FAQs for OpenStack

[How to use cinder block-mgmt object](#)  
[How to fix project images for hierarchical multi](#)

## Projects

[Fuel Control plugin](#)  
[Auth](#)  
[Agn](#)  
[API](#)  
[API - Ruby Client](#)  
[Ansible](#)  
[Barbican](#)  
[Bareos](#)  
[Baremetal](#)  
[Blazar](#)  
[Blueprints](#)  
[Buster](#)  
[Cinder](#)  
[Compute](#)  
[Controller](#)

## All Blueprints

[How to use cinder block-mgmt object](#)  
[How to fix project images for hierarchical multi](#)

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

- ▶ OpenStack開発の標準タスク（≒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 web application interface. The top navigation bar includes a logo, a 'Create New...' button, a search bar labeled 'Jump to...', and a user dropdown for 'Masayuki Igawa'. The main content area displays a list of tasks for the project 'openstack-infra/storyboard'. On the left is a sidebar with icons for Search, Dashboard, Worklists & Boards, Project Groups, Projects (which is selected), and Stories. The main area has a header 'OpenStack Task Tracking API' and a filter bar with tabs 'Active' (selected), 'Merged', and 'Invalid'. Below is a table of task details:

ID	Description	Status	Action
2004103	unable to install mariadb on multinode architecture	Active	Add to board
2004098	Create New fails to create stories	Active	Add to board
2004097	story lists in project view should only show stories with active tasks for that project	Active	Add to board
2003844	Auto populate assignee to task when review is pushed	Active	Add to board
2003886	Project Group Descriptions	Active	Add to board
2003719	BUG: Card links don't work in boards	Active	Add to board
2003701	Mixed Story & Task Automatic Worklist Error	Active	Add to board
2003698	Feature Request: Enforce flavor extended parameters	Active	Add to board
2003663	Browsing tasks on the search view sometimes gives an error	Active	Add to board
2003554	Unicode issue with (at least) reporter names in migration from Launchpad	Active	Add to board

# 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 displays 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 banner for 'openstack' with tabs for Open, Merged, and Abandoned.

**Gerrit Code Review**

**Discuss code**  
and boost your team's code flu by talking about specifics.  
[Learn More](#)

**Serve Git**  
As an integrated experience within the larger code review flow.  
[Learn More](#)

**Manage workflows**  
with deeply integrated and delegatable access controls.  
[Learn More](#)

**Download**  
Our latest release is: **2.15.6**  
[Download](#)

**Search for status:open**

Subject	Status	Owner	Project	Branch	Updated	Size	CR	V	W
Add new policy-action vir_authorized	in progress	Bhagatshri Shewale	openstack/tacker	master (bp/edu-auto-healing)	3:25 PM	1.6 KB	1	1	1
Temporarily remove ha guide from index	in progress	Andreas Jaeger	openstack/openstack-manuals	master (bg/1799511)	3:25 PM	1.6 KB	1	1	1
[WIP] Add native OVSDB implementation for OVSDB	in progress	Rodolfo Alonso Hernandez	openstack/nexentia	master (bg/1799562)	3:25 PM	1.6 KB	1	1	1
Node Exporter: allows to set collectors enable/disable	in progress	Jawon Choo	openstack/openstack-helph-infra	master (set_collectors)	3:25 PM	1.6 KB	1	1	1
Add charts for Elastic Beats	in progress	Steve Wilkerson	openstack/openstack-helph-infra	master (add_elastic_beats)	3:25 PM	1.6 KB	1	1	1
Check pep8 without ignoring D400	in progress	Dan Cong Tien	openstack/calculator	master	3:24 PM	1.6 KB	1	1	1
Further performance tuning changes for Ceph	in progress	Matthew Heiner	openstack/openstack-helph-infra	master (CEPH_TUNING)	3:24 PM	1.6 KB	1	1	1
Add jobs table for bp/add-mysq support-for-freezer	in progress	gengch2	openstack/freezer-api	master (bp/add-mysq-support-for-freezer)	3:24 PM	1.6 KB	1	1	1
Add session api for bp/add-mysq support-for-freezer	in progress	gengch2	openstack/freezer-api	master (bp/add-mysq-support-for-freezer)	3:24 PM	1.6 KB	1	1	1
Add session table for bp/add-mysq support-for-freezer	in progress	gengch2	openstack/freezer-api	master (bp/add-mysq-support-for-freezer)	3:24 PM	1.6 KB	1	1	1
[4606925] Create Araneida manifest file to deploy Range	in progress	Chi Lo	openstack/openstack-helph-admins	master (zinger_manifest)	3:24 PM	1.6 KB	1	1	1
Release for Stein instance1 for TripleO	in progress	Juan Antonio Osorio Robles	openstack/release	master (tripleo/release)	3:23 PM	1.6 KB	1	1	1
Implement Ceph-Client helm test	in progress	Iveis Makadula	openstack/openstack-helph-infra	master (599915)	3:23 PM	1.6 KB	1	1	1
ceph: make log directory configurable	in progress	chirasaubanddy muthurapu	openstack/openstack-helph-infra	master	3:23 PM	1.6 KB	1	1	1
Add startingDeadlineSeconds field to cronJobs	in progress	Dmitri Kuznetsov	openstack/openstack-helph-infra	master	3:23 PM	1.6 KB	1	1	1
Implement cephadm module	in progress	Mike Chen	openstack/kuryr	master (trivial)	3:23 PM	1.6 KB	1	1	1
Add deliverables for ansible-role-openstack-operations for stein	in progress	Juan Antonio Osorio Robles	openstack/release	master (tripleo/release)	3:22 PM	1.6 KB	1	1	1
Add zabbix status upgrade check command	in progress	Rajat Dharmiana	openstack/zabbix	master (upgrade-checkers)	3:22 PM	1.6 KB	1	1	1

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# 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	Jamte 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

# 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

The screenshot shows the Zuul web interface with the following sections:

- check [118]**: Newly uploaded patchsets enter this pipeline to receive an initial +/-1 Verified vote.
- gate [15]**: Changes that have been approved by core reviewers are enqueued in order in this pipeline, and if they pass tests, will be merged. Queue items are identified by the abbreviated hash (git log --format=hh) of the merge commit.
  - 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)
  - Queue: openstack/networking-ovn
    - openstack/networking-ovn 608252.4 (0 min, 3 hr 50 min)
  - Queue: openstack/mistral
    - openstack/mistral 610461.12 (0 min, 2 hr 54 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=hh) 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 codebase.

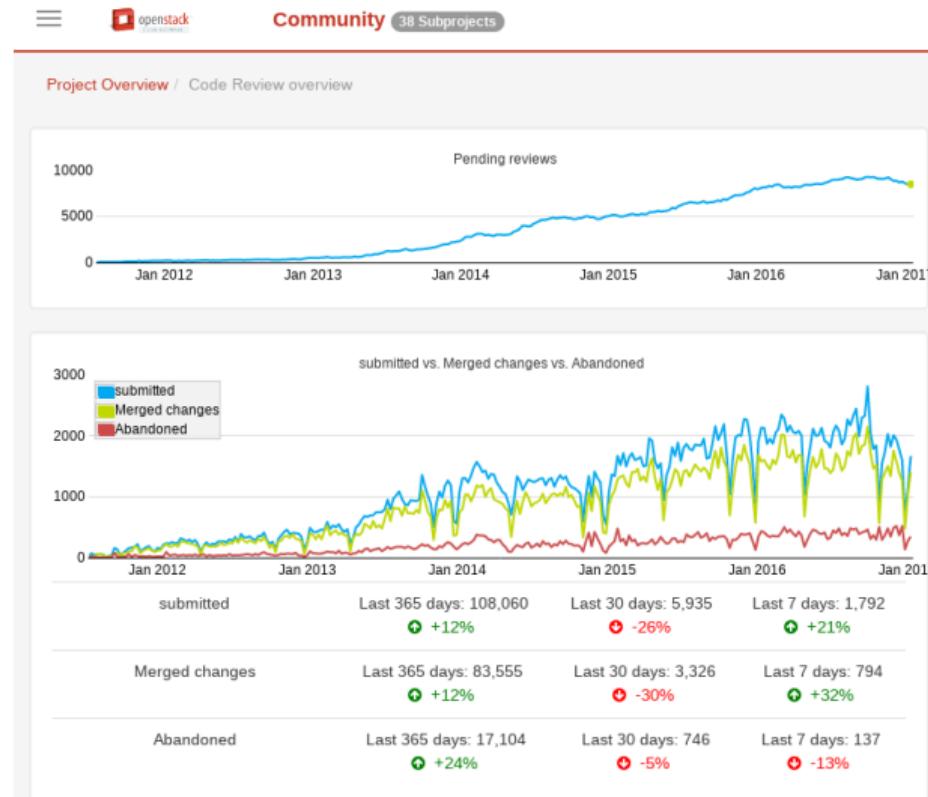
# 開発裏話

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

12 12

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

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>