



# 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  
[github.com/masayukig/oss-development-inside-story](https://github.com/masayukig/oss-development-inside-story)

# Agenda

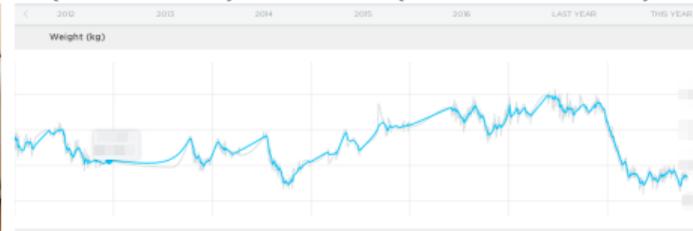
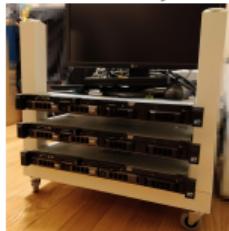
1. 自己紹介
2. 今日のゴール
3. OpenStack とは？
4. 開発ワークフロー
5. コミュニケーションツール
6. StoryBoard によるプロジェクト管理
7. Gerrit によるレビュー
8. Zuul による継続的インテグレーション
9. 開発裏話
10. まとめ

## 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.

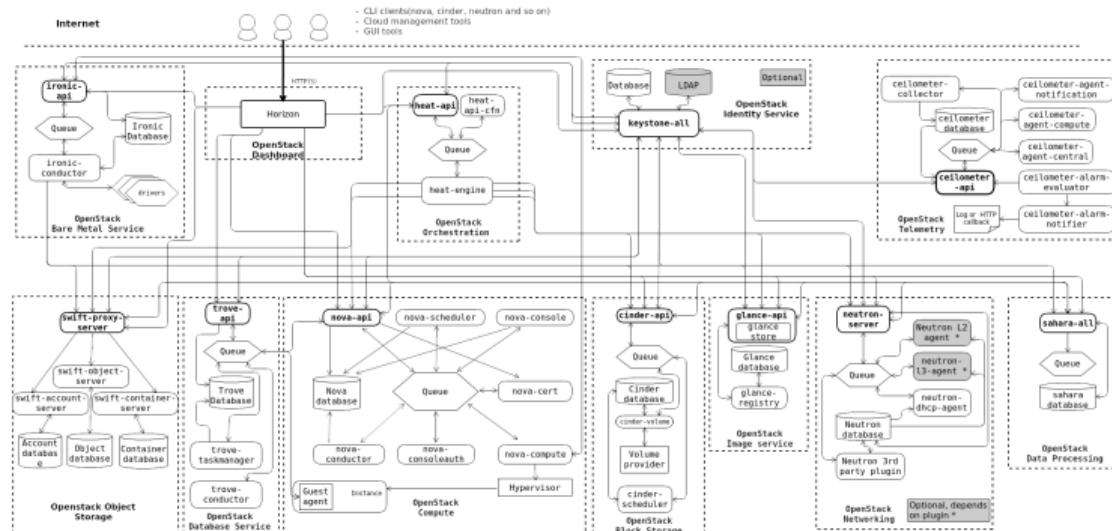


# 今日のゴール

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

# "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

1. StoryBoard へストーリー登録 & 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

1. IRC on Freenode: #openstack-\*(dev,nova,glance,qa,..) <https://freenode.net/>
  2. Mailing List: <http://lists.openstack.org/>
  3. StoryBoard: <https://storyboard.openstack.org/>
  4. Gerrit: <https://review.openstack.org/>
  5. 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 has a speech bubble icon and the word "Chat". The middle button has a people icon and the text "Register a group". The third button on the right has 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 [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 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

**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 for your subscription. To visit the general information page for an unhosted 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:mail@lists.openstack.org">mail@lists.openstack.org</a> .	
List	Description
<a href="#">admin-cont-wg</a>	[no description available]
<a href="#">app-registry-admin</a>	[no description available]
<a href="#">compute</a>	The OpenStack Compute team is the main contact point for anybody running a local OpenStack Group.
<a href="#">heat-compute</a>	[no description available]
<a href="#">elections-oscicongress</a>	[no description available]
<a href="#">enterprise</a>	The Enterprise work group.
<a href="#">foundation</a>	General discussion list for activities of the OpenStack Foundation.
<a href="#">foundation-board</a>	OpenStack Foundation Board of Directors
<a href="#">foundation-testing</a>	working group to set the openstack foundation testing standards for business unit drivers
<a href="#">fervo</a>	Inberg Working Group Mailing List
<a href="#">legal-focus</a>	Discussions on legal matters related to the project
<a href="#">marketing</a>	The OpenStack Marketing list is the major tool to facilitate discussion and best practice sharing among marketers and other engineers in the OpenStack community.
<a href="#">operations</a>	Operations mailing list for the OpenStack community.
<a href="#">openstack-advisories</a>	Key announce mailing list for OpenStack & Security advisories
<a href="#">openstack-api-committers</a>	[no description available]
<a href="#">osqa</a>	The team responsible to write content for openstackqa domain
<a href="#">osqa-contest</a>	List for German speaking OpenStack users
<a href="#">openstack-de</a>	

[OpenStack](#)

OpenStack is a cloud computing platform that provides a unified interface to distributed computing resources. It is designed to support multiple cloud service providers and can be used to build private clouds or public clouds.

[Documentation](#) [Code](#) [Bugs](#) [Blueprints](#) [Translations](#) [Answers](#)

Reported 03:07 ET on 2014-08-01 by [Andy Nelson](#)

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.

Website: <http://openstack.org>  
Wiki: <http://wiki.openstack.org>  
Mailing List: [lists.openstack.org](mailto:lists.openstack.org)  
IRC: <irc://irc.freenode.net/openstack> - see <http://Ribus.openstack.org/cgi-bin/mimeweb/>  
IRC: <irc://irc.freenode.net/openstack> to join  
Code: <http://git.openstack.org/cgit/openstack/openstack>  
IRC: <irc://irc.freenode.net/openstack>  
Documentation: <http://docs.openstack.org>

[Home page](#)

**Project group information**

Maintainers: [Dinesh](#)  
[OpenStack Administrators](#) Not yet selected

Bug tracker: None specified

[Download EDK metadatas](#)

**Projects**

- [Heat Control plugin](#)
- [Auth](#)
- [Agnostic API](#)
- [API Ruby Client](#)
- [Agnos](#)
- [Barbican](#)
- [Baremetal](#)
- [Bastille VM](#)
- [Blazar](#)
- [Bramble](#)
- [CloudConsumer](#)

**FAQs for OpenStack**

All FAQs

- [How to use cinder volume and object-create](#)
- [Search for the best project images for OpenStack result](#)
- [Tenancy projects](#)

[Search](#)

**Get involved**

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

**Achievements**

[Quality Feature Requests](#) [Bug fixes have been merged](#)  
[Storybook](#) on 2014-08-01  
<https://storybook.openstack.org> ([View details](#))

[New feature to get off on](#) [2014-08-01](#)  
A few days ago the Infra Team enabled Yocto to Get off on. [View details](#)

[Older project is migrating to Storybook](#) on 2017-08-01  
As part of an OpenStack initiative, we are migrating the [Deployed Images](#) to Storybook. [View details](#)

[Timeline](#) [2.0 release \(Dante\)](#) on 2014-08-01  
An exciting timeline has been released for returning automation across Horizon in ...

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

1. OpenStack開発の標準タスク（≒バグ管理）ツール
2. スクラッチ作成
3. アーキテクチャ（Frontend: JS/Angular, Backend: Python/Pecan）
4. 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 is titled 'openstack-infra/storyboard' with a star icon. On the left is a sidebar with icons for Search, Dashboard, Worklists & Boards, Project Groups, Projects (which is selected), and Stories. The main content area displays a table of tasks from the 'OpenStack Task Tracking API'. The table has columns for 'ID', 'Title', and 'Status' (with buttons for 'Active', 'Merged', and 'Invalid'). The tasks listed are:

ID	Title	Status
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
2003844	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？

1. Android 開発にて利用されている
2. 開発言語： Java
3. 100% open source
4. 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
5. 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 main header for "Gerrit Code Review".

The main area features a dashboard with four cards:

- Discuss code**: Boost your team's code flu by talking about specifics. [Learn More](#)
- Serve Git**: As an integrated experience within the large 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](#)

Below the dashboard is a section titled "Discuss code" with a detailed description and a screenshot of a code review interface.

To the right, there's a search results page for "status:open" pull requests in the "openstack" project. The results table includes columns for Subject, Status, Owner, Project, Branch, Updated, Size, and CR/V/W. The results show several open pull requests across various branches and projects, such as "master (bp/edu-auto-healing)" and "master (bp/gigamon)".

At the bottom, there's a decorative footer with a hexagonal pattern and a page number "9 / 14".

# 参考：Gertty - Gerrit レビューシステム

1. ターミナルで動作するクライアント
2. <https://gertty.readthedocs.io/>
3. 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 <code>test_create_server_with_bdm_source_image</code>	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
511068	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	Manlik 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-	Manlik 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

► Subscribed projects

# Zuul による継続的インテグレーション - Zuul とは？

1. 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
2. Ansible による CI/CD
3. 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 details:

- Header:** Status, Jobs, Builds, Documentation, Tenant openstack.
- Check Pipeline:** Queue length: 0 events, 0 management events, 0 results. Contains a single job: openstack/tripleo-heat-templates 612249.1 (status: 0 min, 3 hr 51 min).
- Gate Pipeline:** Queue length: 15. Contains three jobs: openstack/tripleo-quickstart-extras 609550.3 (status: 15 min, 2 hr 39 min), openstack/tripleo-quickstart 612289.1 (status: 25 min, 2 hr 5 min), and openstack/tripleo-heat-templates 611309.3 (status: 2 hr 20 min, 46 min).
- Post Pipeline:** Queue length: 0. Contains a note: "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 Pipeline:** Queue length: 0. Contains a note: "This pipeline runs jobs that operate after each change is merged in order to promote artifacts generated in the gate pipeline."
- Pre-release Pipeline:** Queue length: 0. Contains a note: "When a commit is tagged with a pre-release tag, this pipeline runs jobs that publish archives and documentation."
- Release Pipeline:** Queue length: 0. Contains a note: "When a commit is tagged as a release, this pipeline runs jobs that publish archives and documentation."
- Periodic Pipeline:** Queue length: 0. Contains a note: "Jobs in this queue are triggered on a timer."
- Release-post Pipeline:** Queue length: 0. Contains a note: "This pipeline runs release-process-critical jobs that operate after specific changes are merged."
- Tag Pipeline:** Queue length: 0. Contains a note: "This pipeline runs jobs in response to any tag event."
- Periodic-stable Pipeline:** Queue length: 0. Contains a note: "Periodic checks of the code repository."

# 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？
  - 1.1 プロジェクト規模≒ステークホルダの数
  - 1.2 コミュニケーション不足
  - 1.3 レビュー者数の不足
  - 1.4 TODO: レビュー者数推移のグラフを入れる
2. 不安定なCI
  - 2.1 CIも完璧ではない
  - 2.2 迅速な対応が必要
  - 2.3 CIで動いてないものは腐ってくる
  - 2.4 TODO: recheckの話、elastic-recheckの話recheck推移のグラフ？
3. コミュニケーションスキル・英語(世界標準)の重要性
  - 3.1 議論
  - 3.2 職探し（日本で開発者(プログラマ)職困難）
  - 3.3 楽しさ（健康には気をつけましょう！（笑））

# コミュニケーションスキル・英語(世界標準)の重要性



Masayuki Igawa @ @masayukig

#aftersoc #afterstack #OpenStackSummit  
#openstack #suse



1:45 PM - 26 May 2018

12 Likes



Kendall Nelson  
@knelson92

Following

Kicking off the #OpenStackSummit early with #OpenStackUpstreamInstitute! 19 attendees and 14 mentors made it today :)  
@tonybrends @jungleboyj @IldikoVancsa @vkmc @kmarc @marton\_kiss @spotzz\_ @ghanshyammann @masayukig



6:59 AM - 20 May 2018

7 Retweets 31 Likes



13 / 14

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