

How OpenStack became boring (and successful)

CentOS DOJO 2021

- Alfredo Moralejo (amoralej@redhat.com - amoralej - @amoralej)
- Javier Peña (jpena@redhat.com - jpena - @fj_pena)

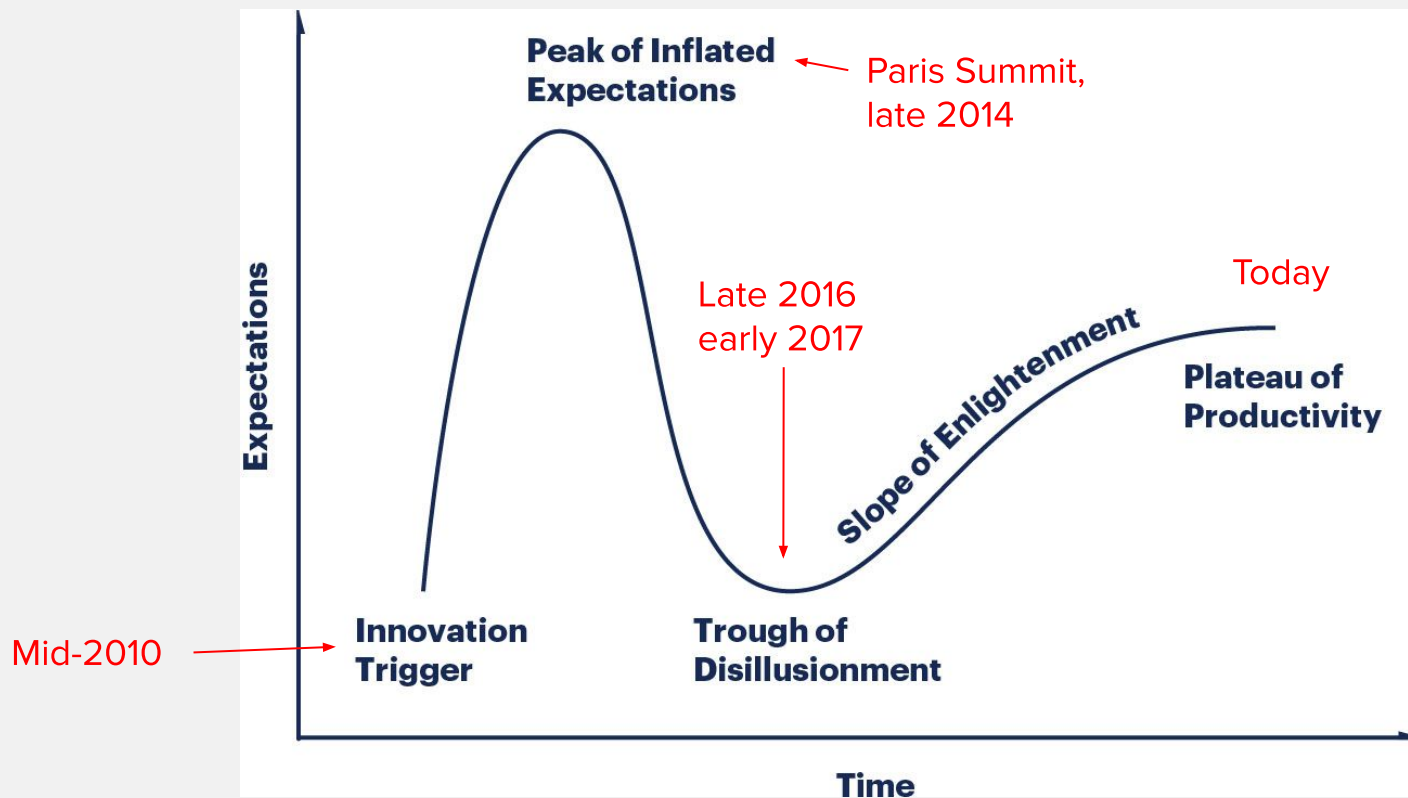
5-February-2021

Agenda

- OpenStack's journey to stabilization
- Evolution of OpenStack deployments
- How RDO helped
- How the Cloud SIG helped
- But it's not all done yet!

OpenStack's journey to stabilization

OpenStack and the hype cycle



Source: Gartner

OpenStack in use

- **Telco**
 - [China Mobile](#)
 - [SK Telecom](#)
- **Manufacturing**
 - [Volvo](#)
 - [BMW](#)
- **SaaS**
 - [Workday](#)
- **Research**
 - [CERN](#)
- **Cloud providers**
 - [Vexxhost](#)
 - [OVH](#)
- **Finance**
 - [Unionpay](#)
 - [BBVA](#)
- **Videogames**
 - [Blizzard](#)
 - [Ubisoft](#)

OpenStack's market

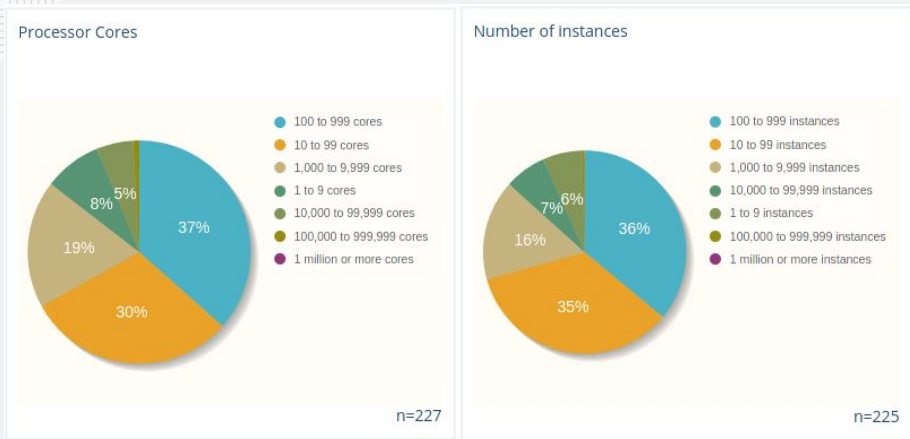
- 451 Research projects a \$7.7 billion USD OpenStack market by 2023, from around \$5 billion in 2020.
- More than 10 million cores in production in 2020.
- NFV use case is very strong
- Massive usage growth in some regions like Asia



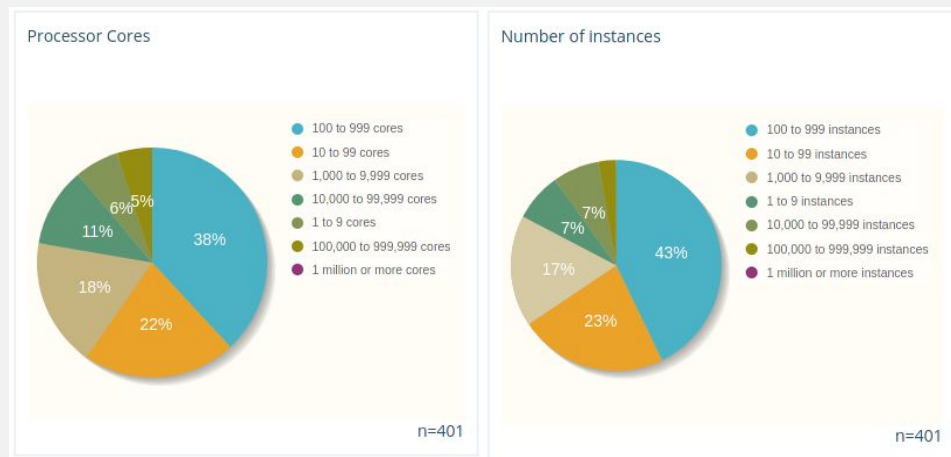
Source: <https://www.openstack.org/blog/thank-you-to-the-last-decade-hello-to-the-next/>

Evolution of OpenStack deployments

Cloud size



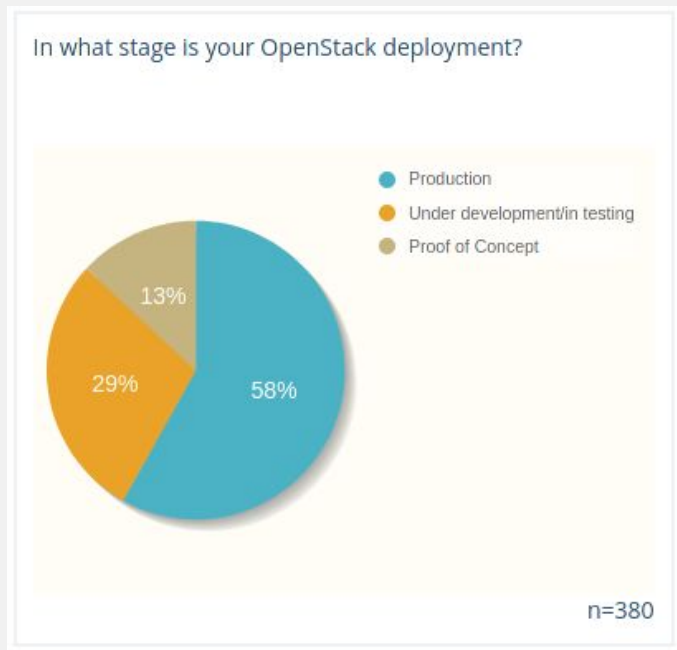
2015



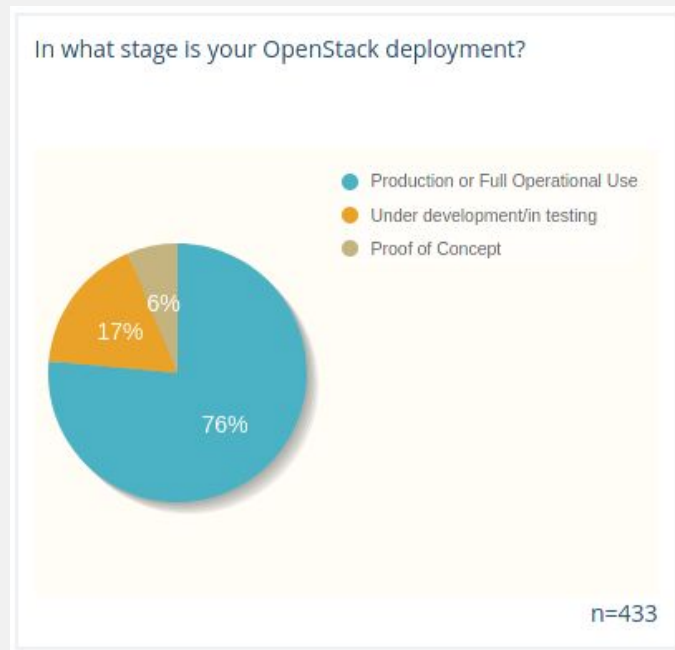
2019

Source: <https://www.openstack.org/analytics>

Deployment status



2015

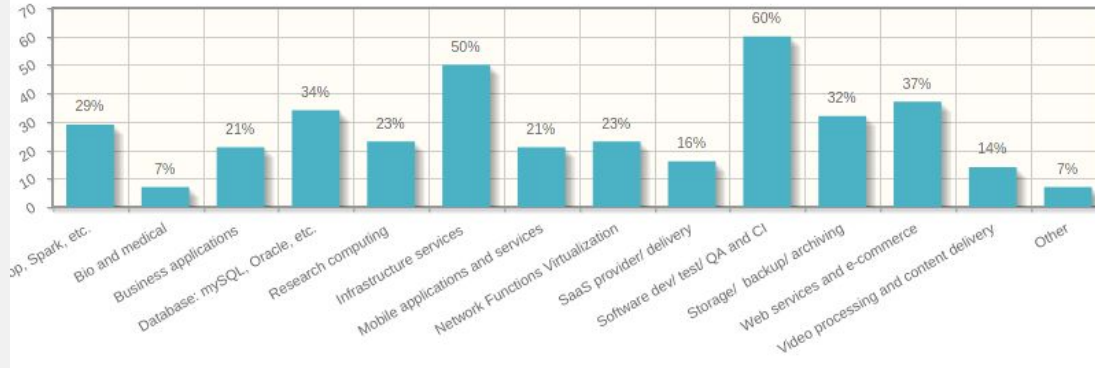


2019

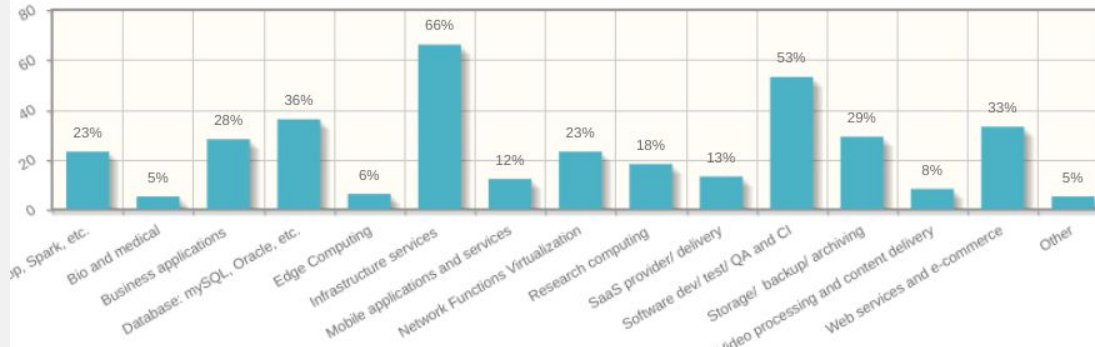
Source: <https://www.openstack.org/analytics>

Workloads

Which workloads are you currently using?



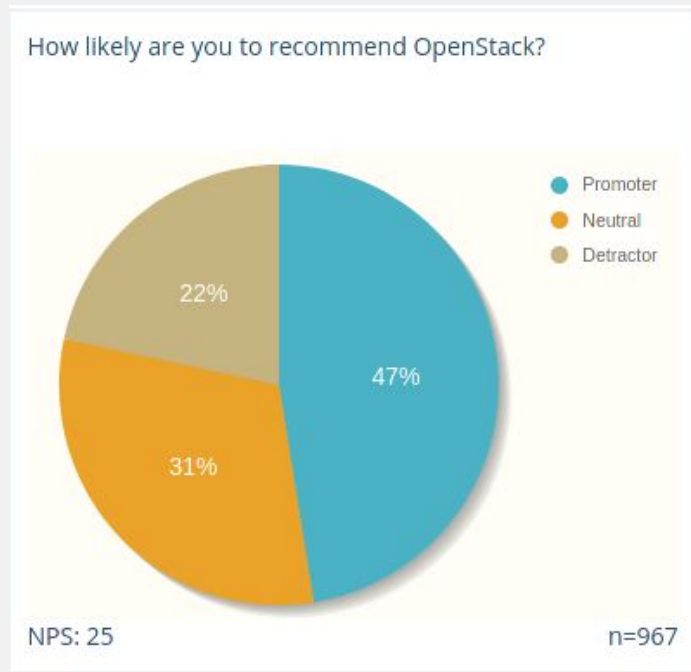
2015



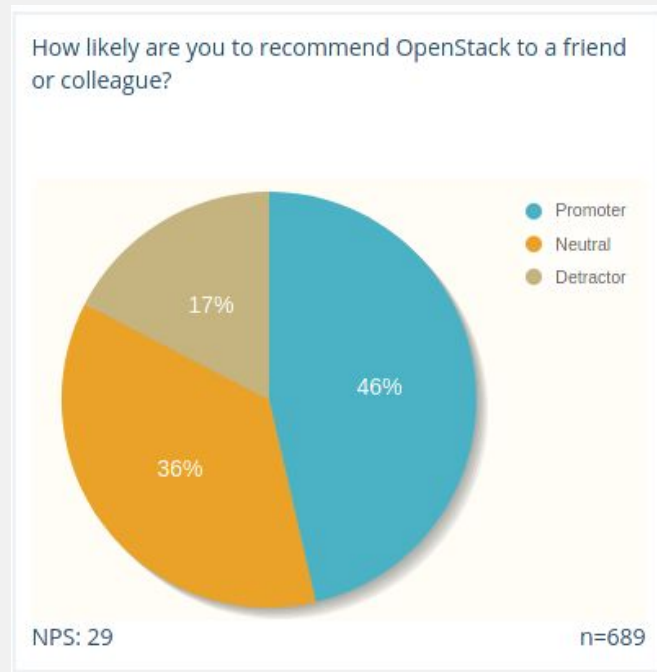
2019

Source: <https://www.openstack.org/analytics>

Net promoters



2015

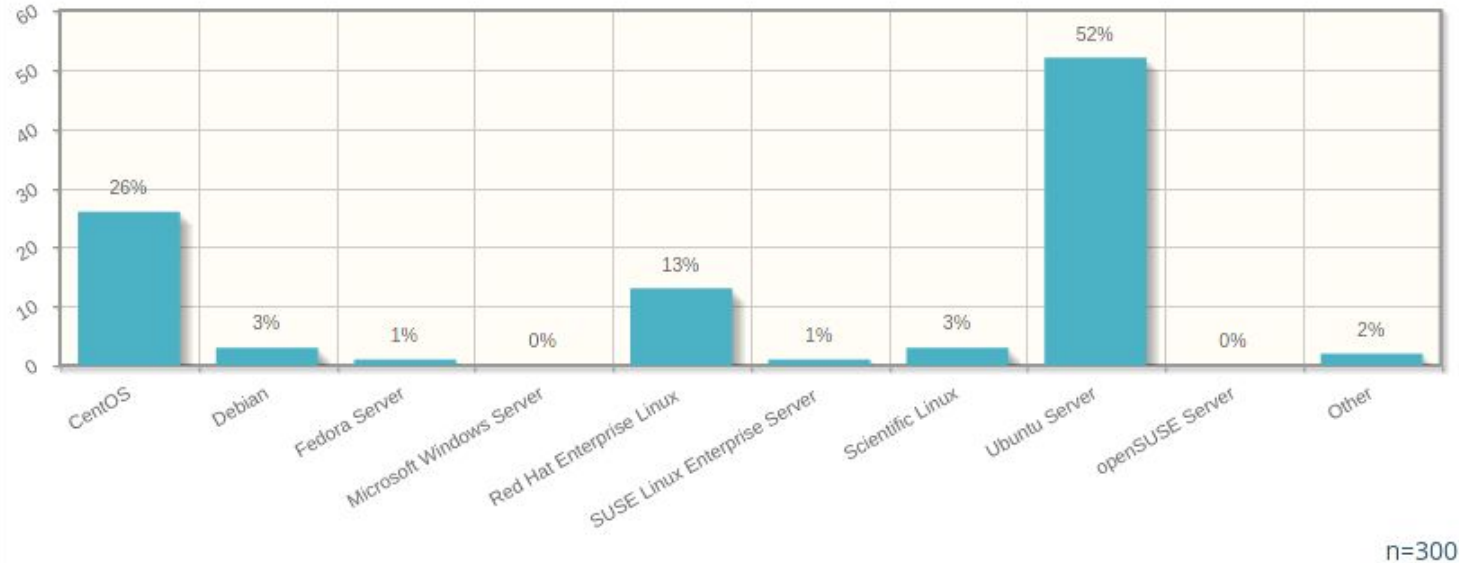


2019

Source: <https://www.openstack.org/analytics>

Operating system (I)

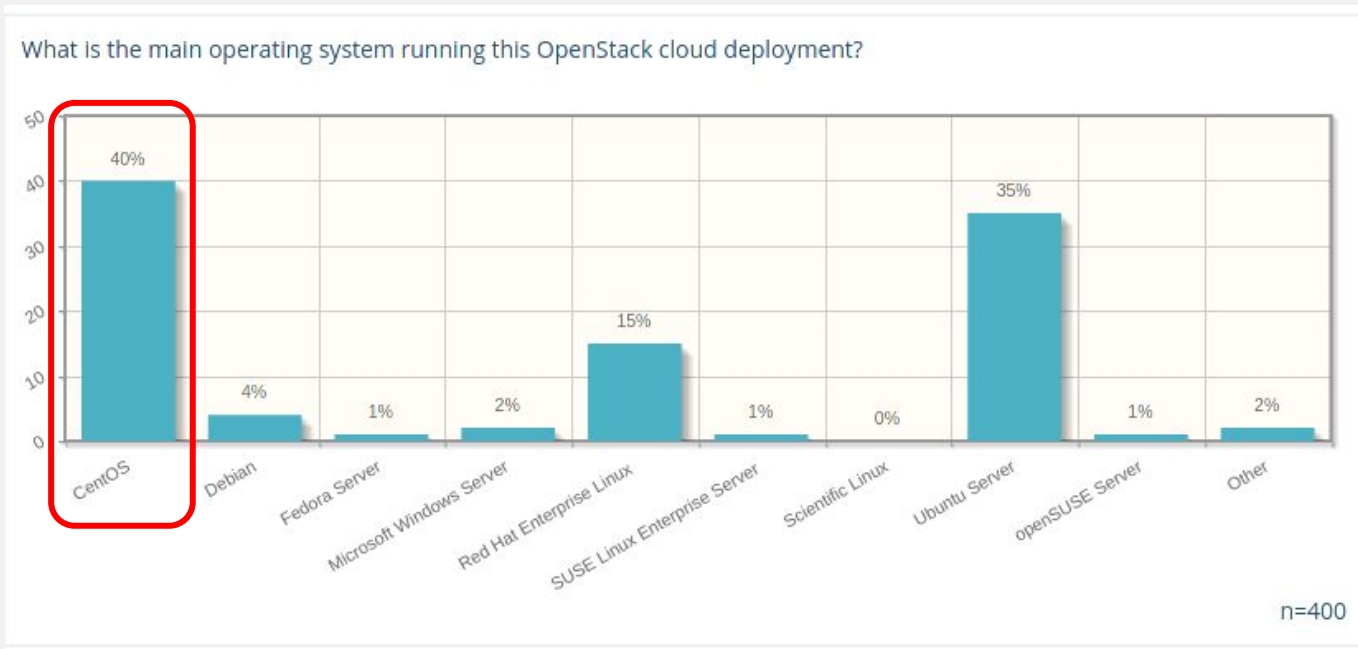
What is the main operating system running this OpenStack cloud deployment?



2015

Source: <https://www.openstack.org/analytics>

Operating system (II)



2019

Source: <https://www.openstack.org/analytics>

How RDO helped

Open OpenStack packaging for CentOS

RDO Dashboard Gerrit Zuul Kibana Etherpad Paste RepoExplorer Code-Search Git-Browser

All **My** Projects People Documentation

Changes Drafts Draft Comments Edits Watched Changes Starred Changes Groups

Search term: rdoproject.org RDO-Packages

Change 31385 - Needs Workflow Label

Initial import of spec [31]

Package review: https://bugzilla.redhat.com/show_bug.cgi?id=1996433

Change-Id: I32e6951c484c6e563bef32ed54245f4441b21b4c

Reply...

Owner **Ricardo Pittau**

Assignee

Reviewers

Project **openstack/sushy-tools-distgit**

Branch **rpm-master**

Topic **new-spec**

Strategy **Rebase if Necessary**

Updated **82 minutes ago**

Cherry Pick **Rebase** **Abandon** **Follow-Up**

Author **Ricardo Pittau** <elfosardo@gmail.com> Dec 16, 2020 3:32 PM

Committer **Ricardo Pittau** <elfosardo@gmail.com> Jan 11, 2021 10:10 AM

Commit 7041d6110b872031a7c4516fee6a7c6064a148c5

Parent(s) f6756ac995cfd0834a602dccf99a270f59cf1d20

Change-Id I32e6951c484c6e563bef32ed54245f4441b21b4c

Code-Review -1

Verified +1

Workflow

| Zuul CI | Jan 11 10:23 AM |
|----------------------------|--------------------------------|
| rdopkg-reqcheck | SUCCESS in 2m 01s (non-voting) |
| rpmint | SUCCESS in 1m 22s |
| DLRN-build-tripleo-centos8 | SUCCESS in 4m 10s (non-voting) |
| DLRN-rpmbuild-centos8 | SUCCESS in 7m 06s |

Files **Open All** Diff against: **Base** **Edit**

| File Path | Comments | Size |
|----------------------------------------------------|---------------|------|
| <input type="checkbox"/> Commit Message | | |
| <input type="checkbox"/> A python-sushy-tools.spec | new: 5 | 158 |
| <input type="checkbox"/> A sushy-emulator.conf | | 0 |
| <input type="checkbox"/> A sushy-emulator.service | | 13 |

RDO Dashboard Gerrit Zuul Kibana Etherpad Paste RepoExplorer Code-Search Git-Browser

All **My** Projects People Documentation

Changes Drafts Draft Comments Edits Watched Changes Starred Changes Groups

Search term: rdoproject.org RDO-Packages

Change 31405 - Merged

Bump tempest to 26.0.0 in Train

The new release of tempest contains lots of fixes

Depends-On: <https://review.rdoproject.org/r/#/c/31408>

Change-Id: I84cb6184008d3d6f0aa2d8f3639c2c8e18612bdf

Reply...

Owner **Martin Kopec**

Uploader **Yatin Karel**

Assignee

Reviewers

Project **rdoinfo**

Branch **master**

Topic

Updated **5 days ago**

Cherry Pick **Revert**

Code-Review +2

Verified +2

Workflow +1

Author **Martin Kopec** <xkopec42@gmail.com> Dec 20, 2020 12:19 PM

Committer **Yatin Karel** <ykarel@redhat.com> Jan 7, 2021 1:35 PM

Commit f4d080f1ea069169bc7215a6cab9ebe0c231a2a8

Parent(s) 21dd9c8b059040fc882f76349ab0aca6b8aa3fe3

Change-Id I84cb610400d3d6f0aa2d8f3639c2c8e18612bdf

| Zuul CI (1 rechecks) | Jan 7 12:49 PM |
|--------------------------------|-------------------|
| tox-linters | SUCCESS in 2m 22s |
| tox-py36 | SUCCESS in 2m 36s |
| rdoinfo-DLRN-check | FAILURE in 1m 54s |
| rdoinfo-DLRN-check-centos8 | SUCCESS in 9m 19s |
| validate-dependencies-rebuilds | SUCCESS in 1m 53s |
| validate-buildsys-tags | SUCCESS in 1m 35s |

RDO Community numbers

Some numbers for 2020:

- Two new major releases: Ussuri and Victoria
- 320 OpenStack repos included
- 2431 CloudSIG builds
- ~ 1500 commits in master branches
- > 50000 lines of code changes
- > 60 authors



One size doesn't fit all

CloudSIG repos:

- Stability
- Controlled
- Operators



RDO Trunk repos:

- Velocity
- Updated
- Developers

Continuous delivery in OpenStack distro

Provide RDO Trunk repos with packages for last commits as soon as possible:

- Deployment tool developers need updated packages to test/deploy.
- Users willing to follow updated branches instead of releases.
- To be used as hotfixes for existing bugs in releases.

RDO follows a Continuous Delivery approach for our RDO Trunk repositories.

- Thousands of packages processed each month
- DLRN tool and infra to maintain these repos

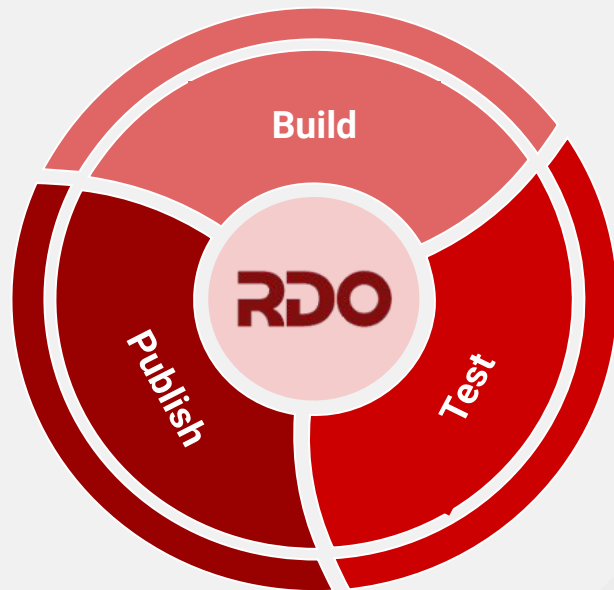
Automate as much as possible

RDO can be considered a distro by itself:

- 350 OpenStack packages
- 400+ non-OpenStack dependencies

Automate the more usual processes:

- Builds for new OpenStack releases
- Updates of dependencies
- Validation of new builds
- Promotion of new packages to CentOS mirrors



How the Cloud SIG helped

Ease consumption

Make users experience as smooth as possible:

- Providing CloudSIG OpenStack repos in CentOS official mirrors
- Release RPMs to configure repos in an easy and consistent way

```
dnf install -y centos-release-openstack-victoria
```
- Integrated with other SIGs repos
- Providing simplistic deployment tool to PoC cases (packstack)

```
packstack --allinone
```
- Cooperation with other production-ready deployment tools as TripleO, Kolla, etc.



Security and quality

- Controlled supply-chain:
 - Controlled infra to build, sign and push packages
 - Koji dedicated instance provides controlled build environments
 - Visibility on what and how packages are created, signed and shipped
 - CentOS mirrors provide a highly available and distributed network
- Continuous validation of packages
 - CentOS updates
 - Other SIGs updates

Collaboration among projects

CentOS SIGs as framework for collaboration between projects

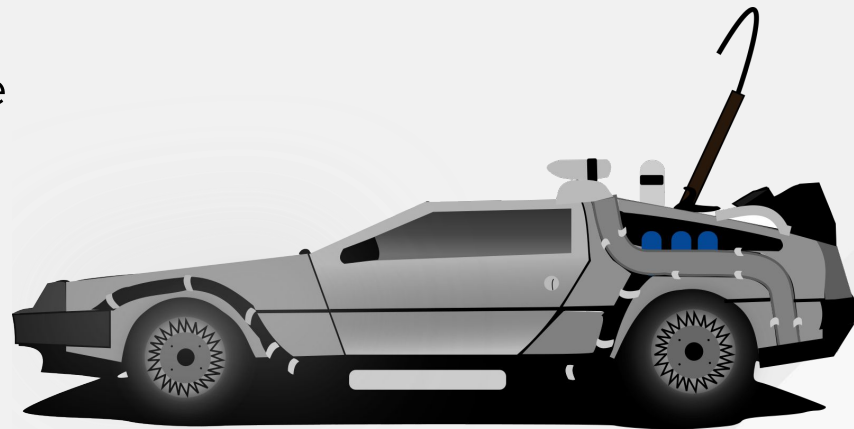
- Collaboration among SIGs in shared packages:
 - Virt SIG: virtualization related packages
 - NFV SIG: OpenvSwitch, OVN
 - OpsTools SIG: operational tools
 - Messaging SIG: Rabbitmq
- Common tooling for packages from different SIGs



But it's not all done yet!

Future direction

- CentOS Stream adoption
 - RDO Wallaby released for CentOS Stream 8
 - Earlier releases will be tested on CentOS Stream 8, too
- CentOS Stream 9 approaching fast
 - Will start testing when available
- Revamp Cloud SIG meetings
 - You are welcome to join!!



Contributing to CloudSIG

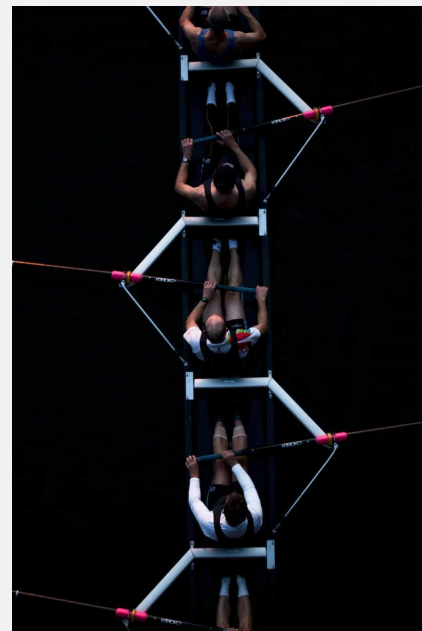
Join Us

- irc: #centos-devel or #rdo on freenode
- ML: <https://lists.rdoproject.org/mailman/listinfo>
- Periodic meetings:

<https://etherpad.openstack.org/p/centos-cloud-sig>

<https://etherpad.openstack.org/p/RDO-Meeting>

CloudSIG != OpenStack



Q/A