



CERN Linux services Status update

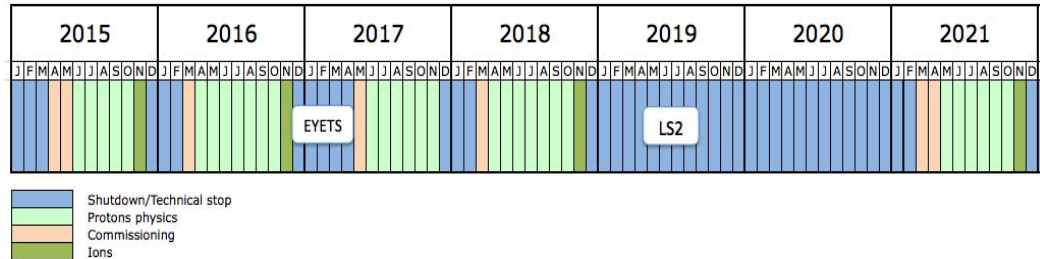
On behalf of CERN linux support team IT-CM-LCS
Presented by Thomas Oulevey

Linux @ CERN

- CERN CentOS 7
 - Version 7.5 released June 2018
- Scientific Linux CERN 6
 - Version 6.10 released July 2018
- Scientific Linux CERN 5
 - EOL since April 2017 (Support for experiments until LS2 -> 2019-03-31)
- RHEL 5 / RHEL 6 / RHEL 7 / RHEV
 - Licences =~ 800
 - **Extended Update Support** licences

Scientific Linux 6 @ CERN

- 6.10 released on July 2018
- Likely latest release
 - No new hardware support



Life-cycle Dates

All future dates mentioned for "End of Production 1" and "End of Production 2" are close approximations, non definitive, and subject to change.

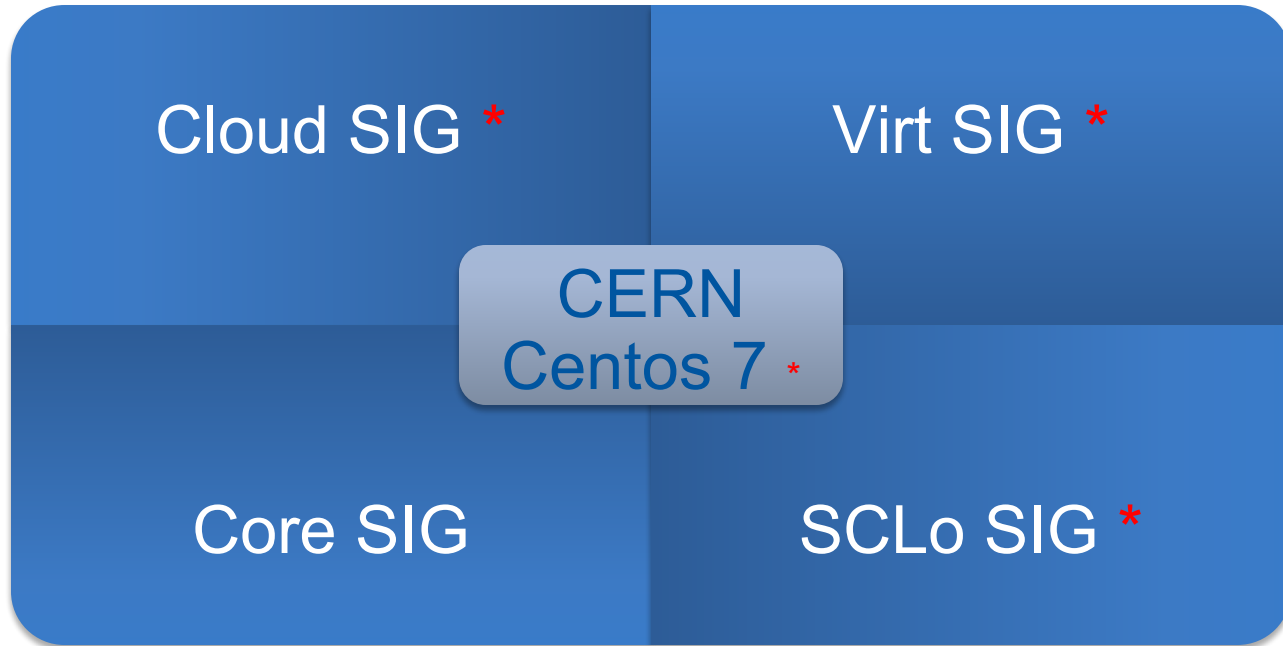
RHEL Version	General Availability	End of Production 1	End of Production 2	End of Production 3 (End of Production Phase)	End of Extended Life-cycle Support	End of Extended Life Phase
3	October 23, 2003	July 20, 2006	June 30, 2007	October 31, 2010	January 30, 2014	January 30, 2014
4	February 14, 2005	March 31, 2009	February 16, 2011	February 29, 2012	March 31, 2017	Ongoing
5	March 15, 2007	January 8, 2013	January 31, 2014	March 31, 2017	November 30, 2020	Ongoing
6	November 10, 2010	May 10, 2016	May 10, 2017	November 30, 2020	N/A	Ongoing
7	June 10, 2014	~Q4 of 2019	~Q4 of 2020	June 30, 2024	N/A	Ongoing

source

CentOS 7 Community

- CERN is a contributor to some SIGs ; cloud(openstack), sclo, virt(**kubernetes**), storage(**ceph mimic**)
- CentOS Dojo in October 2017
- CentOS Dojo 2018 next week (<https://cern.ch/centos>)
- Alternative architectures (aarch64, ppc64le, i686) support is there.
 - Alt arches are released at the same time as x86_64.
 - Building tools have been published (<https://github.com/CentOS/reimzul>)
- CI infrastructure (jenkins) for a lot of upstream projects: RDO, openshift, gluster, etc...

CERN CentOS 7 (CC7)



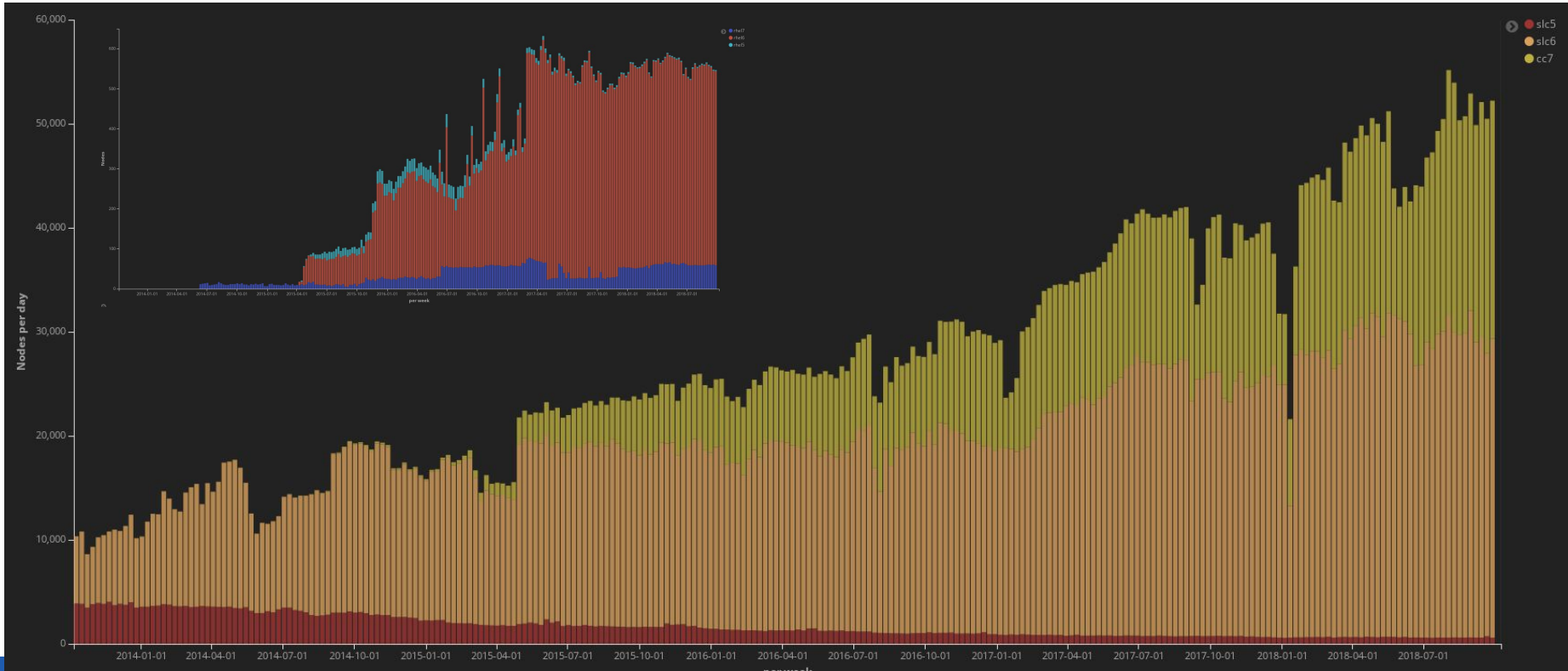
Special Interest Group
<https://wiki.centos.org/SpecialInterestGroup>

* CERN contributions

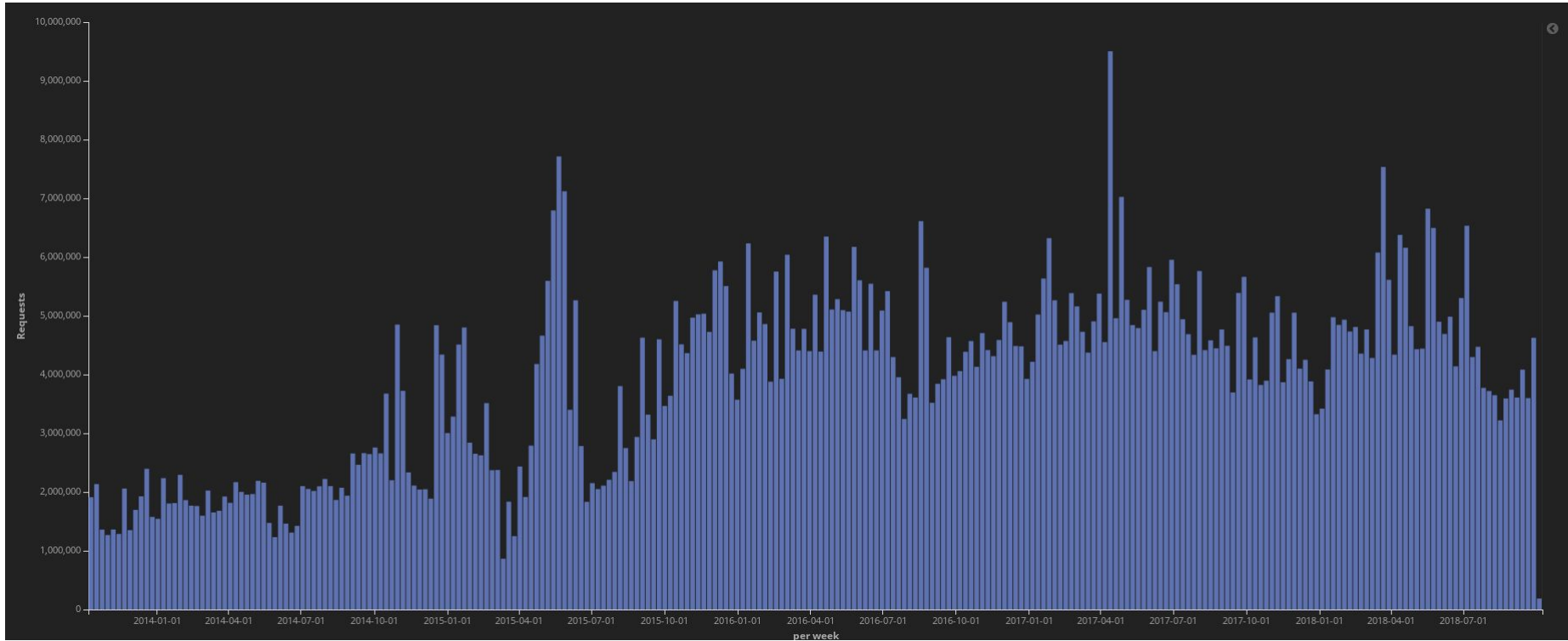
CERN CentOS 7 (CC7)

- <http://linux.web.cern.ch/linux/centos7/>
- LocMap : Configure not centralized managed hardware. Based on same puppet modules (reworked and shipped as rpm) as the datacentre.
 - Using puppet version 4 in CERN CentOS 7.5 (CI testing with puppet 5)
- No support for alternative architectures yet.

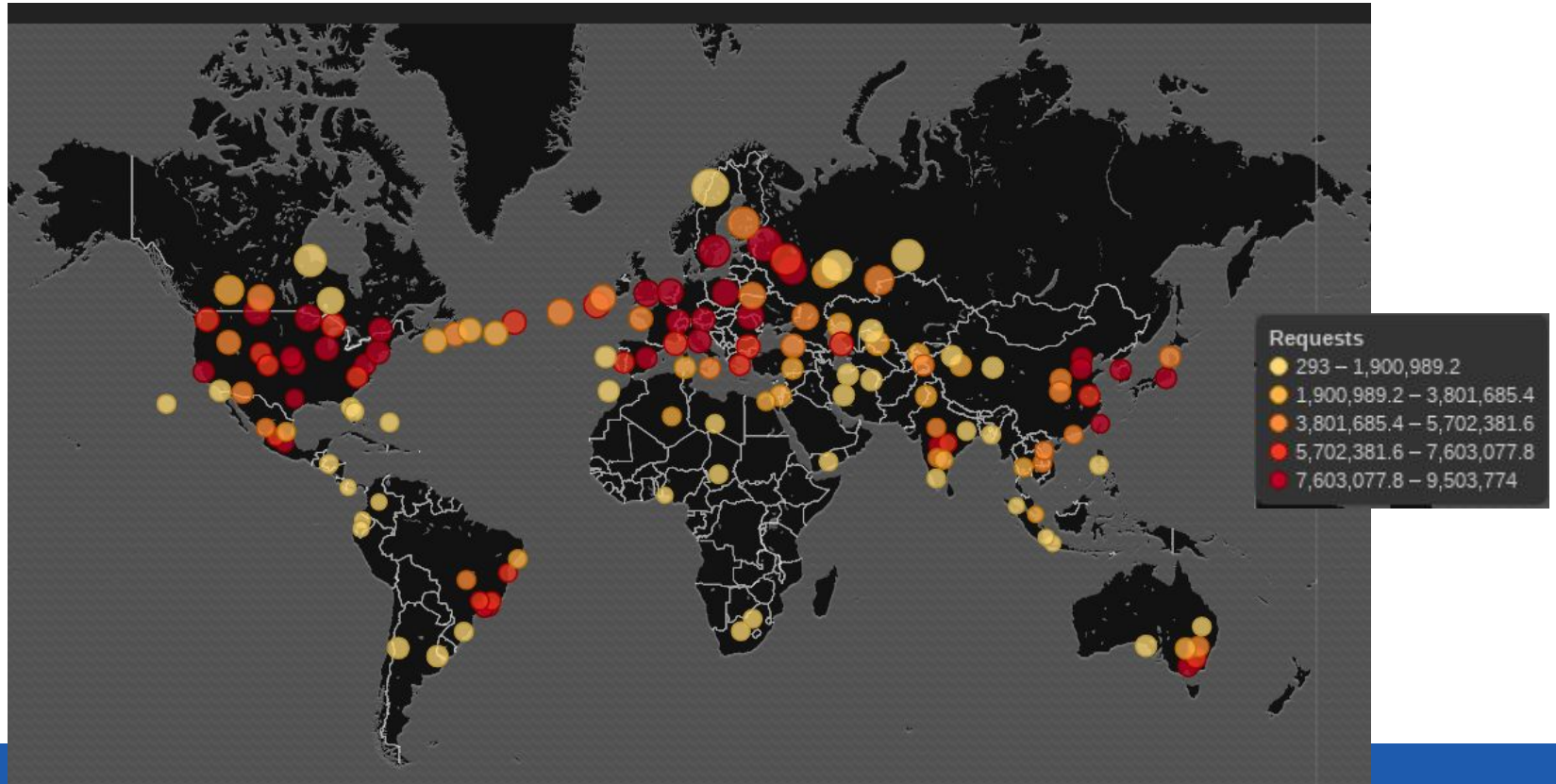
In numbers



In numbers

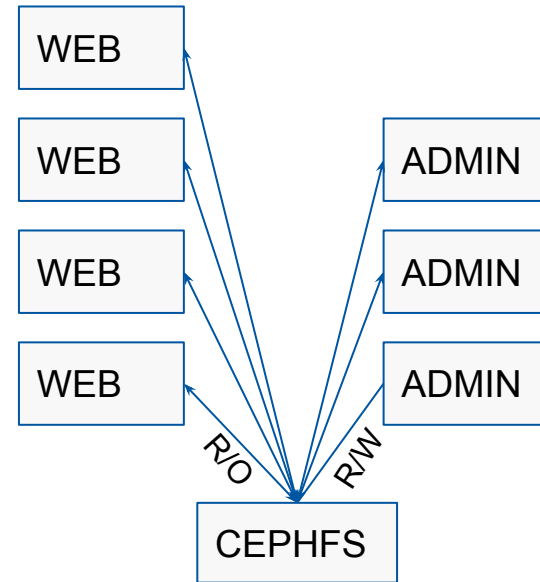


In numbers



Moving services to the cloud

- LINUXSOFT
 - Main distribution server
 - Also the mirror service
 - \approx 50000 daily clients updating
- Migration
 - Netapp -> fuse cephfs
 - RH cluster -> DNS lb
 - Cronjob -> Nomad
- Planned for November 2018



(future) Distributed Cronjob

- How to scale cronjobs ?
 - Administrative tasks to run on exactly a node
 - Mirroring (pulp3?)
- Generic solution for running scripts based on Hashicorp Nomad.

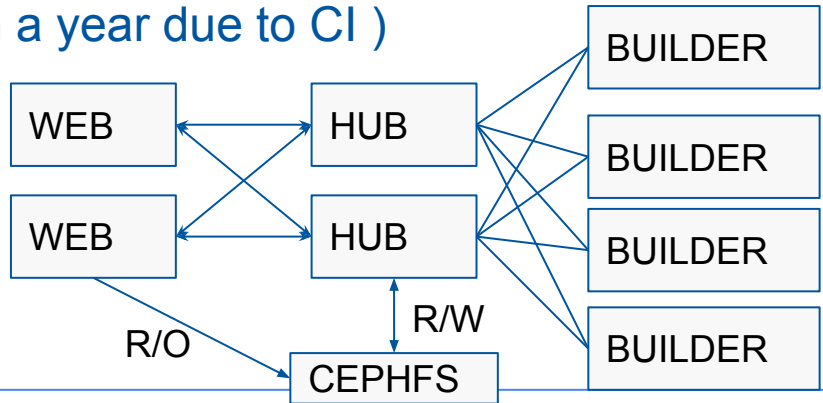
“Nomad can run a diverse workload of Docker, non-containerized, microservice, and batch applications”

(future) Distributed Cronjob

- Puppet modules just works(tm) but 'wget' from hashicorp servers.
- Deploy from gitlab
- UI is not great (nomad-ui?)
- Plan to contribute src.rpm for hashicorp products to a CentOS SIG (other users at CERN)

Moving services to the cloud

- KOJI
 - Builds linux support team RPMS for the main distribution
 - Build cloud / docker images
 - Used by service manager to build their projects
 - A total of 357 users (+ 30 % in a year due to CI)
- Migration
 - Netapp -> fuse cephfs
 - RH cluster -> DNS lb
 - Migrated in August 2018



Moving services to the cloud

- KOJI

- Builds link
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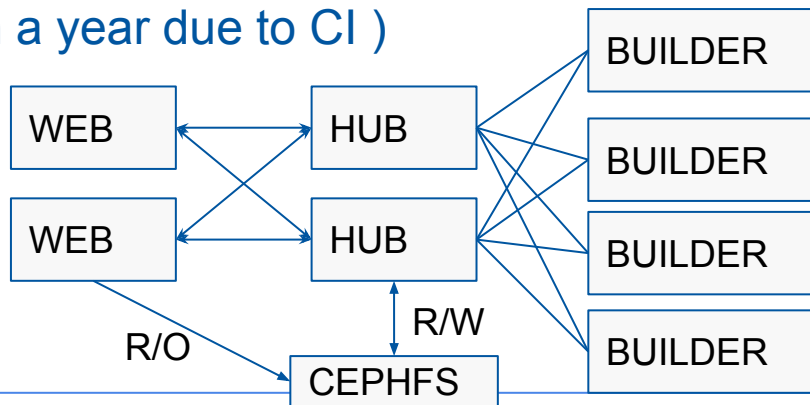
- Migration

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Succeeded/Failed/Canceled Builds

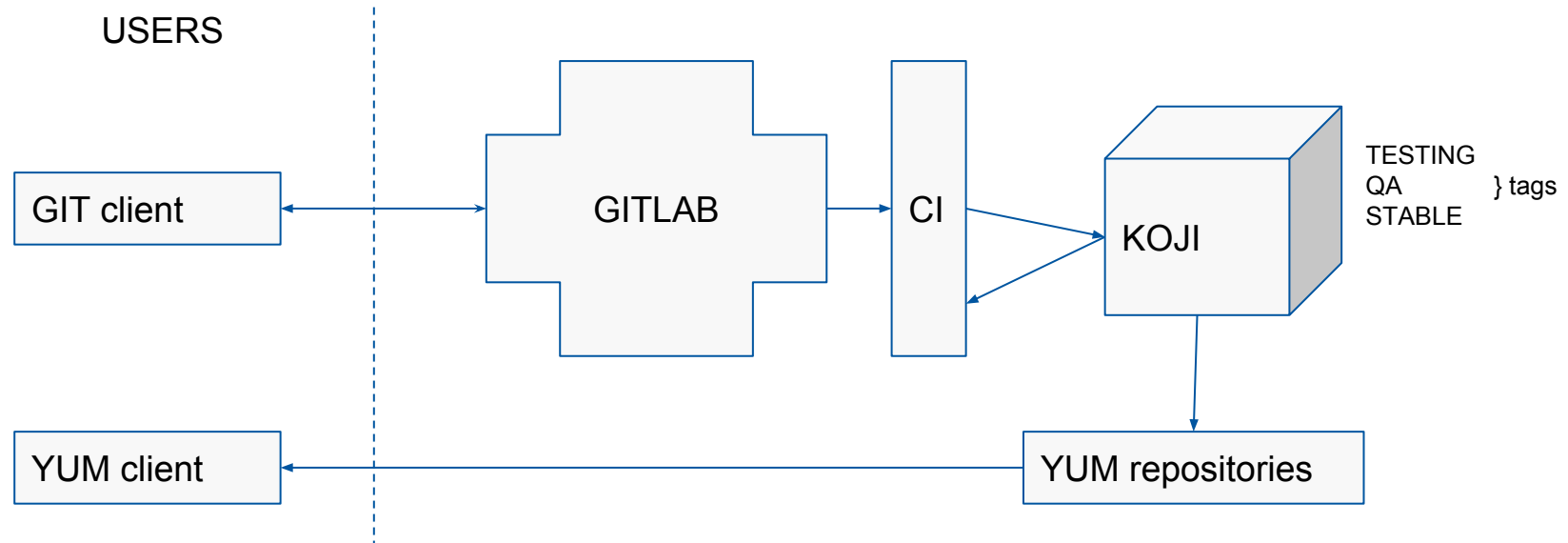
Show last days

Type	Builds
Succeeded	29549
Failed	2123
Canceled	46



CERN Koji and Gitlab for users

- Building RPMS from Gitlab in Koji



CEF

- Build

Pipeline **Jobs 6**

Status	Job ID	Name	Coverage
✓ Srpm			
passed	#1306810	build_srpm	01:18 5 months ago
✓ Rpm			
passed	#1306811	build_rpm	01:19 5 months ago
✓ Kscratch			
passed	#1306812	kscratch	02:21 5 months ago
✓ Kbuild			
passed	#1306813	kbuild	02:04 5 months ago
✓ Deploy Qa			
passed	#1306814 manual	tag_qa	01:23 5 months ago
✓ Deploy Stable			
passed	#1306815 allowed to fail manual	tag_stable	01:14 5 months ago

GIT

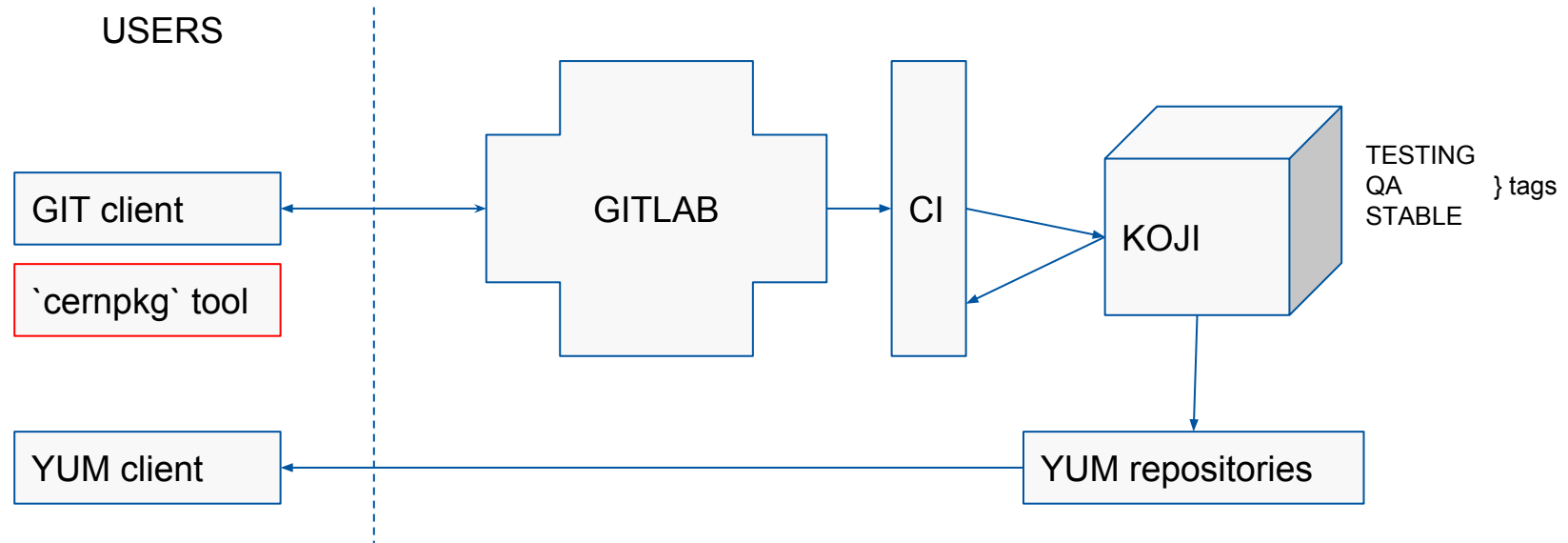
YU

TESTING
QA } tags
STABLE



CERN Koji and Gitlab for users

- Improvements : cernpkg (different branches per distribution)



Future

- Lightweight containers support
 - Interest from HEP community ?
- CC8
 - No news yet. RHEL8 Beta coming this year.
 - Improvements ?
- Freeipa
 - Testing with 1 fellow
- Using s3.cern.ch for static content

Questions

