



CERN Linux services and open source communities overview

On behalf of CERN linux support team

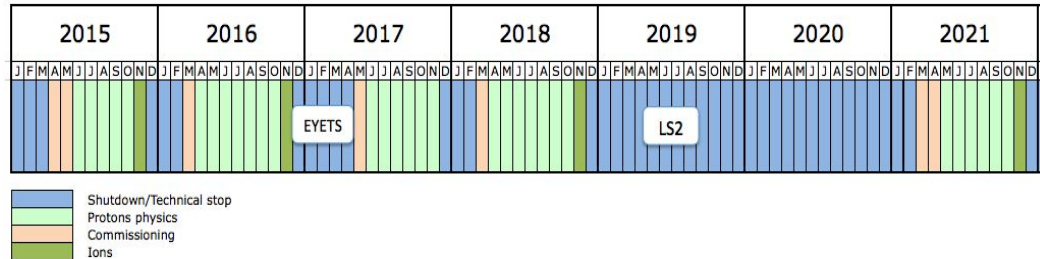
Presented by Thomas Oulevey IT-CM-LCS (soon to be BE-CO-IN)

Linux @ CERN

- CERN CentOS 7 (x86_64)
 - Version 7.6 released December 2018 (7.7 planned for Q3 2019)
- Scientific Linux CERN 6 (x86_64 i686)
 - Version 6.10 released July 2018 (last minor release)
- Scientific Linux CERN 5 (x86_64 i686)
 - EOL since April 2019
- RHEL 5 / RHEL 6 / RHEL 7 / RHEV
 - Licences =~ 800
 - **Extended Update Support** licences

Scientific Linux 6 @ CERN

- 6.10 released on July 2018
- last 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

CERN CentOS 7 (CC7)

- <http://linux.web.cern.ch/linux/centos7/> (Supported until end of 2023)
- No support for alternative architectures yet. (limited HW available Techlab)
- Snapshots for 13 months

Cloud SIG *

Virt SIG *

CentOS 7

Core SIG

SCLo SIG *

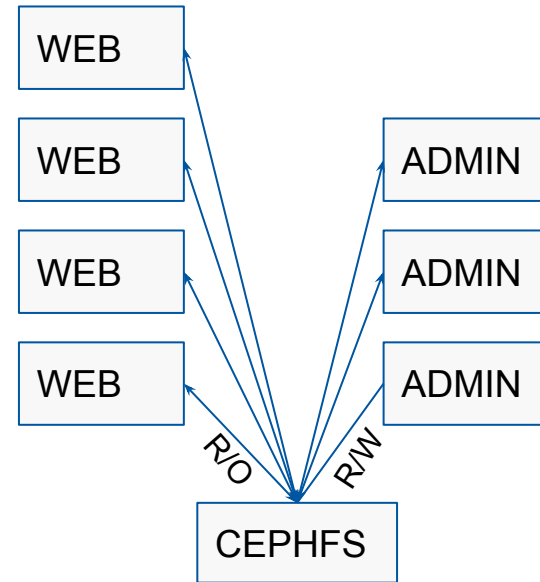
Special Interest Group

<https://wiki.centos.org/SpecialInterestGroup>

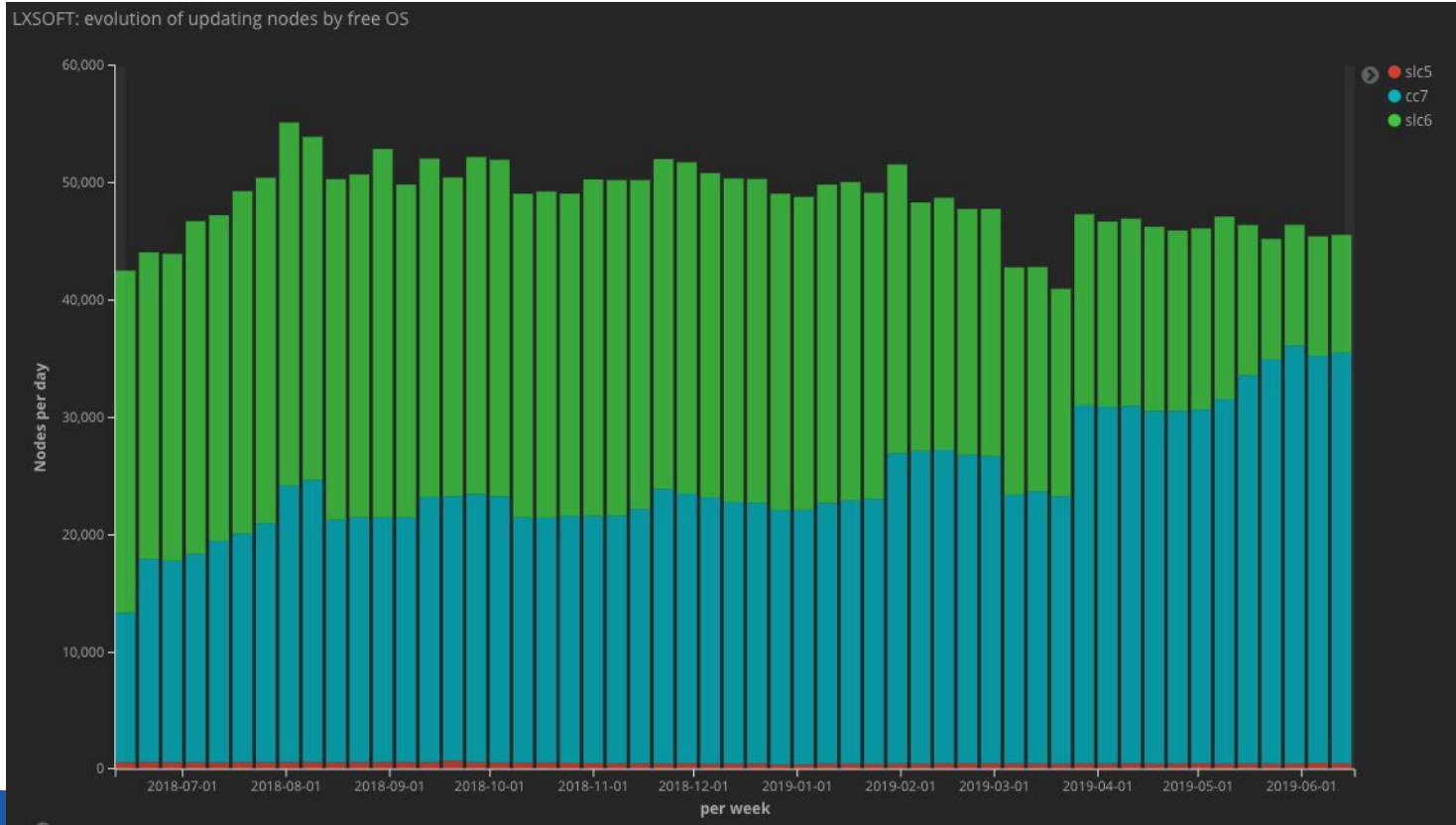
* CERN contributions

linuxsoft.cern.ch

- LINUXSOFT
 - Main distribution server
 - Also the mirror service
 - ~ = 50000 daily clients updating
 - TN trusted
- 2018 Migration
 - Netapp -> fuse cephfs
 - RH cluster -> DNS lb
 - Cronjob -> Nomad



In numbers

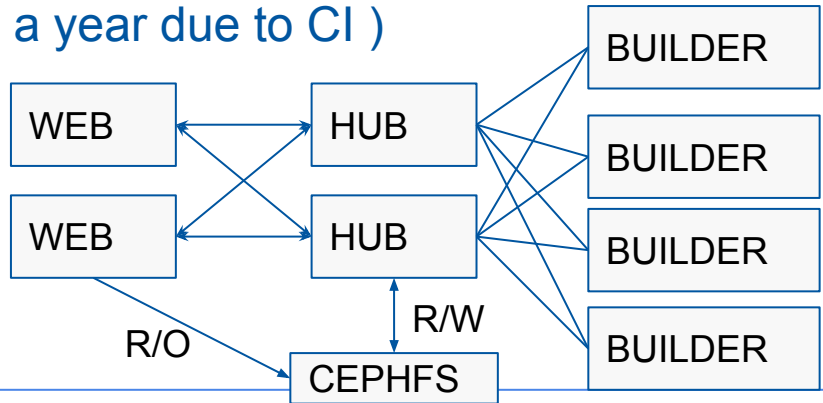


aims.cern.ch

- PXE infrastructure to install machine (automated installation with kickstart, uefi support, etc...)
- Review of the service Q3

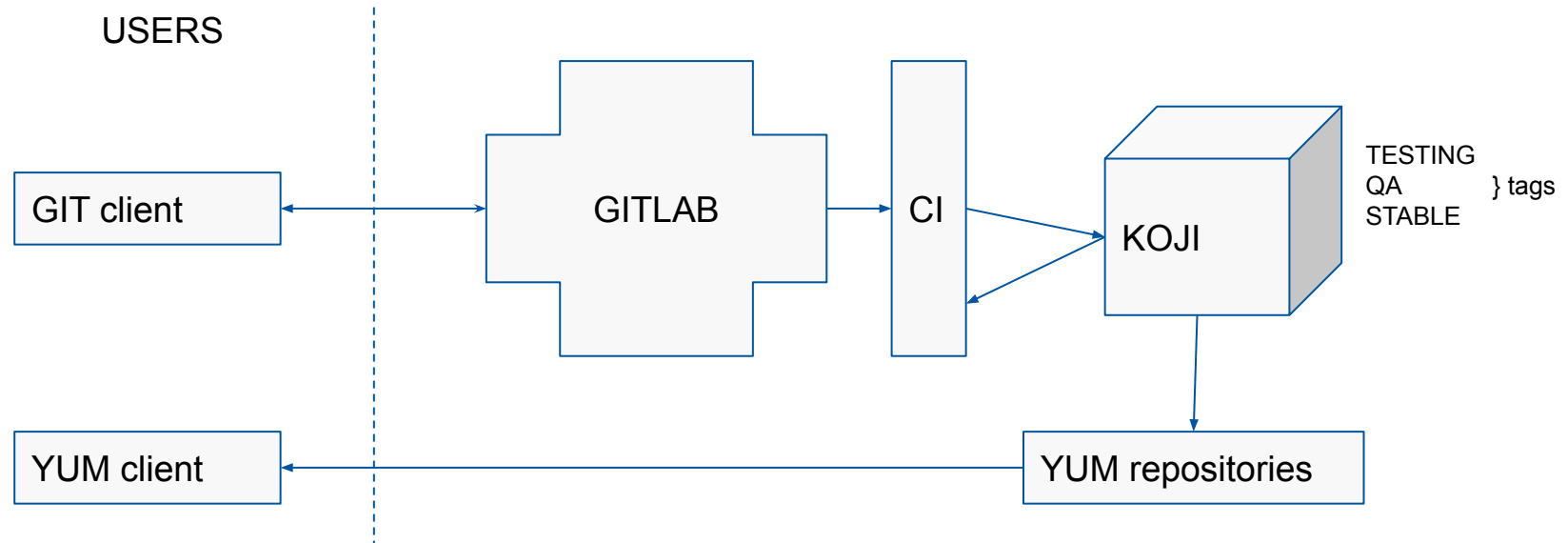
koji.cern.ch

- 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 382 users (+ 30 % in a year due to CI)
- Migration
 - Netapp -> fuse cephfs
 - RH cluster -> DNS lb
 - Migrated in August 2018



Koji and Gitlab for users

- Building RPMS from Gitlab in Koji



CentOS Community

- CERN is a contributor to few SIGs ; cloud(openstack), sclo, virt(**kubernetes**), storage(**ceph mimic**)
- Alternative architectures (aarch64, ppc64le, i686) support is there.
 - Alt arches are released at the same time as x86_64.
 - armv7hl available too, but less resources. Thanks @pgreco !
- CI infrastructure (jenkins) for a lot of upstream projects: RDO, openshift, gluster, etc...
- Community build system (<https://cbs.centos.org>) based on Koji, maintained by CentOS and CERN

Other communities

- ELrepo project : “The Community Enterprise Linux Repository” provides additional kernels for CentOS : kernel-ml and kernel-lt packages.
<https://elrepo.org>
- Fedora epel : <https://fedoraproject.org/wiki/EPEL>

(CERN?) CentOS 8

https://wiki.centos.org/About/Building_8

- Builds for x86_64, i686, aarch64, ppc64le :
<https://koji.mbox.centos.org/koji/index>
- Builds for armv7hl :
<https://koji.armhfp-mbox.centos.org>
- Reviewing CERN strategy for CentOS 8 in next month

System On Chip

- What do you need ?
- Work in the open ? Contact communities ? Centos SIG ? Other ? aarch64 ? armv7hl ?
- Publicly available build systems to leverage more vendor hardware ?
- Numbers ?
- Interest in netboot for installation ?
- Timeline ? CentOS 7 or CentOS 8 ?
- Toolchain redistribution possible ?
- Package everything as RPM ? If using existing tools it will be only commits in a git repo.

Questions

