



CERN Linux services Status update

Thomas Oulevey on behalf of CERN linux support team
Presented by Ulrich Schwickerath

Linux @ CERN

- Scientific Linux CERN 5
 - EOL since April 2017 (Support for experiments until LS2)
- Scientific Linux CERN 6
 - Version 6.9 released April 2017
- CERN CentOS 7
 - Version 7.3 released January 2017
- RHEL 5 / RHEL 6 / RHEL 7 / RHEV
 - Licences =~ 800
 - **Extended Update Support** licences

Scientific Linux 6 @ CERN

- 6.9 released on April 10th 2017
- Likely latest release before Production 3 phase
 - No new hardware enablement during phase 3

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

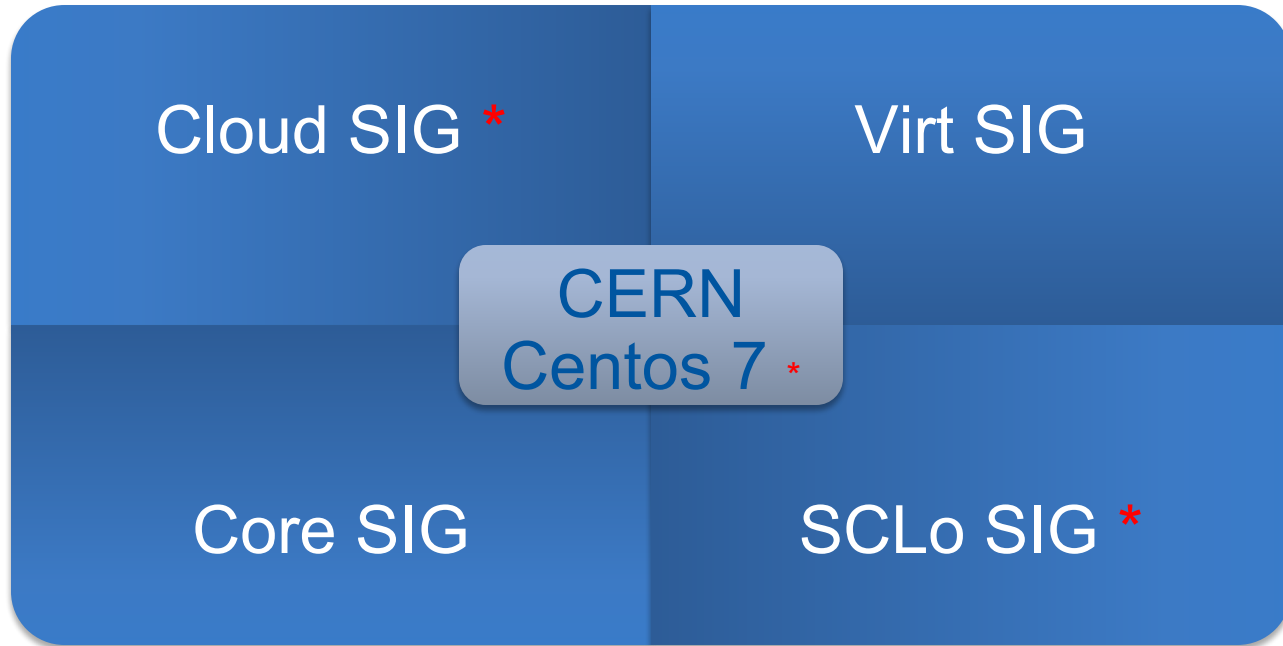
CentOS 7 Community

- CERN is a contributor to some SIGs ; cloud/openstack, sclo, opstools.
- Attended the first CentOS Interlock in 2016:
 - For contributors
 - Still Red Hat centric but it is changing
 - Trying to make the project more friendly to newcomers
 - Switching from OS only to the SIG model, where content is produced, is challenging
 - Infrastructure is in very good shape
 - We would like to see more external people in the Core SIG
 - Alternative architectures support is another great challenge and is moving in the right direction. Discussion about long term support
- Community Koji instance <https://cbs.centos.org> ran by CERN.

CERN CentOS 7 (CC7)

- CentOS 7 upstream rpms (very same packages released by CentOS team, no CERN specific customization)
- CERN Linux team provides additional software through CERN and CERNONLY repositories
- CERN CentOS 7 updates are staged
- CERN CentOS 7 has internal snapshots
- <http://linux.web.cern.ch/linux/centos7/>
- LocMap : Configure not centralized managed hardware. Based on same puppet module (reworked and shipped as rpm) as the datacentre.
 - Version 1.0, replaces lcm in CERN CentOS 7.3

CERN CentOS 7 (CC7)



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

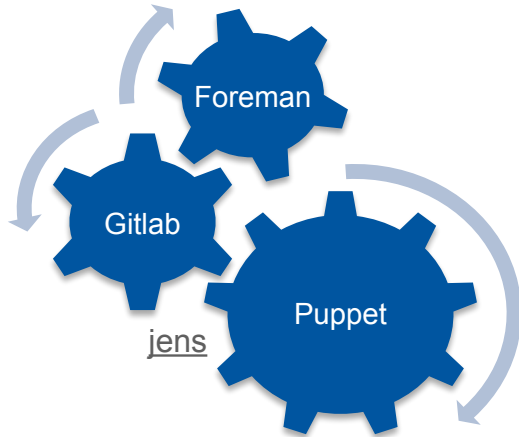
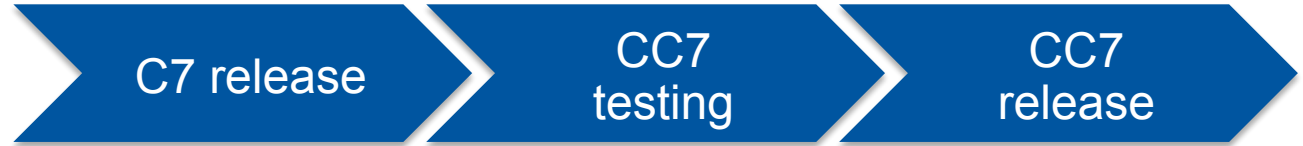
* CERN contributions

CC7 outside the Datacentre

- Locmap is written in python and replaces old lcm tools.
- Can configure any machine on CERN network, fallback to default configuration otherwise
- Settings gather from Active Directory and our network equipment database LANdb
- Version 1.0 written by a technical student: Aris Boutselis.
- Todo list:
 - Create a plugin framework for reading settings from different sources.
 - Configure more puppet modules (e.g: bagplus).
 - Get rid of some python dependencies (python26 not supported)

CC7 Lifecycle in the datacentre

Once a week



- IT Linux support tests & integration
- Rebuild if needed (nss) with Koji

- Disable by default
- Enabled on datacentre QA environment

- Pushed to all clients
- Enabled on datacentre PROD environment

CERN CentOS 7 Future

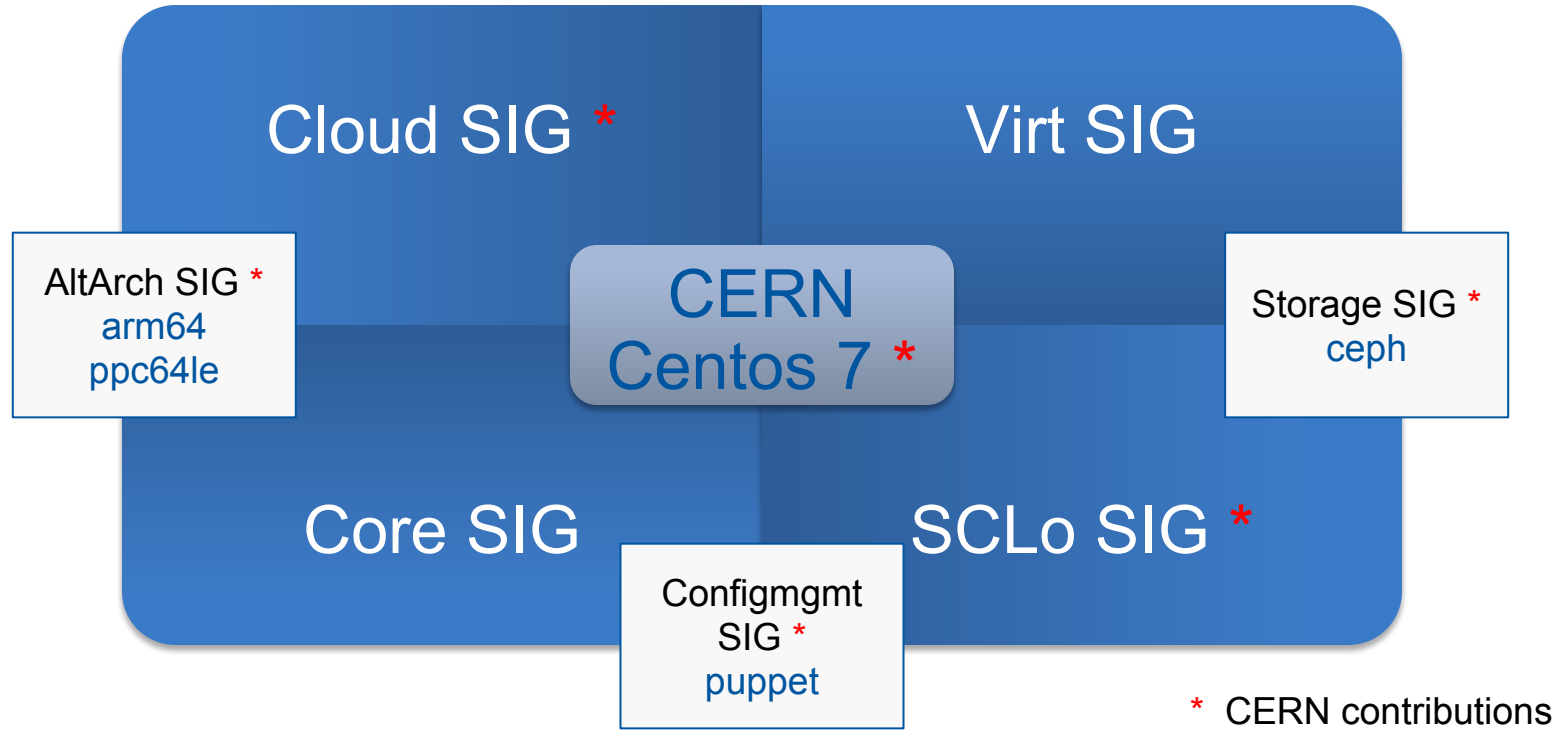


Special Interest Group

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* CERN contributions

CERN CentOS 7 Future



In numbers

```
linuxsoft.cern.ch updaters statistics for: 2017-04-18
-----
slc5/i386:    168 [int: 72 + ext: 95 + pup: 1] snap: 0 pusn: 0
slc5/x86_64: 475 [int: 287 + ext: 177 + pup: 11] snap: 27 pusn: 10
slc5/all:    636 [int: 359 + ext: 265 + pup: 12] snap: 27 pusn: 10

slc6/i386:    228 [int: 144 + ext: 82 + pup: 2] snap: 0 pusn: 0
slc6/x86_64: 17706 [int: 3159 + ext: 1505 + pup:13042] snap: 328 pusn:12428
slc6/all:    17924 [int: 3303 + ext: 1577 + pup:13044] snap: 328 pusn:12428

cc7/x86_64:  12319 [int: 2113 + ext: 297 + pup: 9909] snap: 610 pusn: 483
cc7/all:     12319 [int: 2113 + ext: 297 + pup: 9909] snap: 610 pusn: 483

rhel5/i386:   1 [int: 1 + ext: 0 + pup: 0] snap: 0 pusn: 0
rhel5/x86_64: 8 [int: 1 + ext: 0 + pup: 7] snap: 0 pusn: 7
rhel5/all:   9 [int: 2 + ext: 0 + pup: 7] snap: 0 pusn: 7

rhel6/i386:   0 [int: 0 + ext: 0 + pup: 0] snap: 0 pusn: 0
rhel6/x86_64: 534 [int: 8 + ext: 0 + pup: 526] snap: 2 pusn: 520
rhel6/all:   534 [int: 8 + ext: 0 + pup: 526] snap: 2 pusn: 520

rhel7/x86_64: 67 [int: 0 + ext: 0 + pup: 67] snap: 0 pusn: 0
rhel7/all:   67 [int: 0 + ext: 0 + pup: 67] snap: 0 pusn: 0
-----
All: 30832 [int: 5772 + ext: 2101 + pup:22959] snap: 965 pusn:12921
-----
int: CERN network, using yum-autoupdate
ext: external network, using yum-autoupdate
pup: CERN network, using puppet
snap: CERN network, using repository daily snapshots
pusn: CERN network, using repository daily snapshots with puppet
```

In numbers

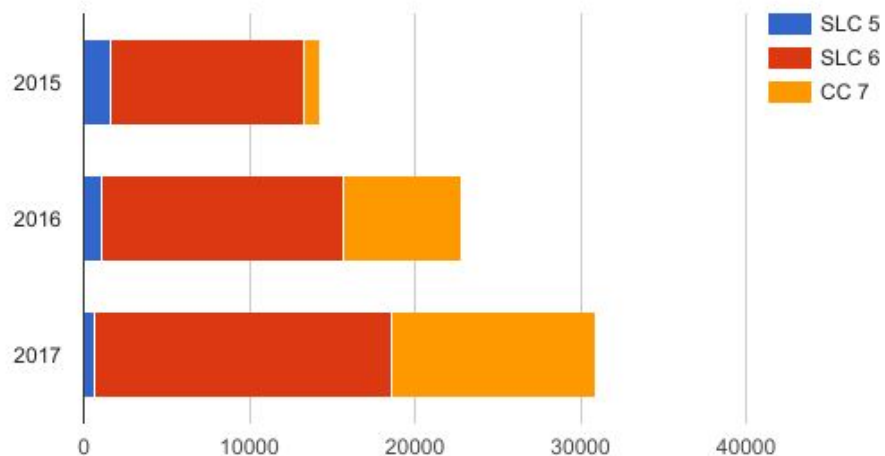
```
linuxsoft.cern.ch update
```

```
-----  
slc5/i386: 168  
slc5/x86_64: 475  
slc5/all: 636  
  
slc6/i386: 228  
slc6/x86_64: 17706  
slc6/all: 17924  
  
cc7/x86_64: 12319  
cc7/all: 12319  
  
rhel5/i386: 1  
rhel5/x86_64: 8  
rhel5/all: 9  
  
rhel6/i386: 0  
rhel6/x86_64: 534  
rhel6/all: 534  
  
rhel7/x86_64: 67  
rhel7/all: 67  
-----
```

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```

Linux distribution evolution (active hosts per year)



CERN Koji

- Running version 1.11 ; better support for image factory, new admin features.
- Since 2017, Production container and cloud images built with Koji thanks to Image Factory plugin

<https://github.com/redhat-imaging/imagefactory>

Total builds	26195 (1908 failed)
Total targets	249
Total active users	234

Questions

