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.

<table>
<thead>
<tr>
<th>RHEL Version</th>
<th>General Availability</th>
<th>End of Production 1</th>
<th>End of Production 2</th>
<th>End of Production 3 (End of Production Phase)</th>
<th>End of Extended Lifecycle Support</th>
<th>End of Extended Life Phase</th>
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<tr>
<td>6</td>
<td>November 10, 2010</td>
<td>May 10, 2016</td>
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<td>November 30, 2020</td>
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<td>-Q4 of 2019</td>
<td>-Q4 of 2020</td>
<td>June 30, 2024</td>
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<td>Ongoing</td>
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</table>
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](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
- 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)

Cloud SIG

Virt SIG

Core SIG

SCLo SIG

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

* CERN contributions
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

C7 release
- IT Linux support tests & integration
- Rebuild if needed (nss) with Koji

CC7 testing
- Disable by default
- Enabled on datacentre QA environment

CC7 release
- Pushed to all clients
- Enabled on datacentre PROD environment
CERN CentOS 7 Future

Cloud SIG *

Virt SIG

Core SIG

SCLo SIG *

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

* CERN contributions
CERN CentOS 7 Future

- Cloud SIG *
- Virt SIG
- Core SIG
- SCLo SIG *

- AltArch SIG *
  - arm64
  - ppc64le

- Storage SIG *
  - ceph

- Configmgmt SIG *
  - puppet

* CERN contributions
In numbers

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| All:          | 30832| 5772 | 2101 | 22959 | 965   |

**int**: CERN network, using `yum-autoclean`

**ext**: External network, using `yum-autoclean`

**pup**: CERN network, using puppet

**snap**: CERN network, using repository daily snapshots

**pusn**: CERN network, using repository daily snapshots with puppet
In numbers

Linux distribution evolution (active hosts per year)

- slc5/i386: 158
- slc5/x86_64: 475
- slc5/all: 635
- 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

All: 30832

int: CERN network, using yum-autocupdate
ext: external network, using yum-autocupdate
pup: CERN network, using puppet
snap: CERN network, using repository daily snapshots
repsn: CERN network, using repository daily snapshots with puppet
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

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Total builds</td>
<td>26195 (1908 failed)</td>
</tr>
<tr>
<td>Total targets</td>
<td>249</td>
</tr>
<tr>
<td>Total active users</td>
<td>234</td>
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Questions