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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</thead>
<tbody>
<tr>
<td>6</td>
<td>November 10, 2010</td>
<td>May 10, 2016</td>
<td>May 10, 2017</td>
<td>November 30, 2020</td>
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<td>Ongoing</td>
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<td>7</td>
<td>June 10, 2014</td>
<td>~04 of 2019</td>
<td>~04 of 2020</td>
<td>June 30, 2024</td>
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</table>

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
- 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
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

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

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

* CERN contributions
In numbers

```
<table>
<thead>
<tr>
<th>Environment</th>
<th>int:</th>
<th>ext:</th>
<th>pup:</th>
<th>snap:</th>
<th>pnus:</th>
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</thead>
<tbody>
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<td>95</td>
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```

* Int: CERN network, using yum-autocupdate
* Ext: external network, using yum-autocupdate
* Pup: CERN network, using puppet
* Snap: CERN network, using repository daily snapshots
* Pnus: CERN network, using repository daily snapshots with puppet
In numbers

Linux distribution evolution (active hosts per year)

<table>
<thead>
<tr>
<th>Year</th>
<th>SLC 5</th>
<th>SLC 6</th>
<th>CC 7</th>
</tr>
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<td>2015</td>
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<td></td>
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<td>2017</td>
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Int: CERN network, using yum-autoupdate
ext: external network, using yum-autoupdate
pup: CERN network, using puppet
snap: CERN network, using repository daily snapshots
push: 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

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