Strategy regarding CentOS8
@Edinburgh

Rob Currie @Edinburgh
GridPP at Edinburgh

As of 23/06/21 sticking with CentOS7 for user-facing grid service deployments unless there is a strong reason to migrate.

If grid service is fully supported on CentOS8 we’re exploring/already-using Alma Linux instances. (e.g. NFS, SQUID, containers)
Personal use of CentOS(7/8)

+ Regularly use VMs for academic projects (and iDRAC access). Arguably best use of a x86 macbook.

+ Given my background in Linux I prefer RPM > APT > other. (Did daily drive Debian for ~12months, and have administered it on a mail server)

+ As many people probably agree containers and virtualization are likely technologies of the future.
Within our University

- Informatics and Physics departments (several hundred machines) are migrating user desktops from CentOS7 to Ubuntu. (Academic/student facing Linux systems are now Ubuntu 20.04)

- Core services still on CentOS7 are staying CentOS7 until service EOL. Some before CentOS7 EOL, some align closely.

- University shared SGE cluster planning to stay on CentOS7 until EOL. At mercy of vendors regarding tools such as GPFS. No clear strategy for migration, perceived to be years away.
Some RHEL8 Changes

- Location of packages in repos has changes (PowerTools and alike) and there is a stronger emphasis on package groups.

- Grub2 configuration has now changed. My best advice is learning how to use `grubby` as well as the older grub2-… commands.

- Removing support for old hardware (via optional kernel modules) was not fun. There are several painful workarounds.

- Podman is not docker. But it is a poor-man’s singularity (kind-of…)

- Able to install/build the latest kernels due to the gcc bumps which may be reason enough to migrate off CentOS7 imo.
Things on CentOS8 distros I tend to check

+ Elrepo. We use kernel-ml and kernel-lt extensively.

+ Epel. I use a lot of useful tools from here such as htop, iftop,…

+ Docker and Singularity

+ Cvmfs and some 3rd party RPM repos
Migration scripts

+ Alma:
  https://github.com/AlmaLinux/almalinux-deploy

+ Rocky:
  https://github.com/rocky-linux/rocky-tools

+ Redhat:

+ Stream:
  https://www.centos.org/centos-stream
Migrating, what I’ve tested…

+ **CentOS8.2 → CentOS-Stream**
  Have done this on a preliminary NFS server, (Just worked, not ecstatic about stream but it was “safe”) things came back, no damage.

+ **CentOS8.2 → RedHat8.2**
  Not suitable for a large cluster, maybe not suitable for GridPP at all(?). Have personal server running after this, no issues.

+ **CentOS8.3 → AlmaLinux8.3**
  Just worked, no obvious problems.

+ **AlmaLinux8.4 → RockyLinux 8.4**
  Arguably the best experience I’ve had.
Migration scripts a few afterthoughts

+ Some of the earlier migration scripts would leave you without a functioning bootloader. This appears to be improving but when I tested it wasn’t a great solution for automation.

+ Normally works ‘just fine’. Occasionally some bugs get introduced by bad/unexpected RPM behaviour.

+ 3rd party repos (such as the ones from Microsoft) can cause the update to bail out half-way through leaving you with a mess.

+ As all of them are in various levels of supported I would only use this on boxes where re-installing is likely not an option.
Redhat/Oracle Linux

+ RH has a license problem for mid-sized academia. I think they know it but they don’t plan to fix it.

+ RH is officially supported by Dell/HP however. I would assume that means that they’ve targeted/tested products against this.

+ RH works well, but feels a little restrictive, some things require a little more effort to get working but ultimately, it’s not an overly painful experience to use it and setup the licence for security updates.

+ Oracle Linux just pushes you onto Oracle infrastructure (no surprises). Has some of the worst out of the box support for community tools/solutions and they’d prefer you to use theirs.
Alma Linux – My personal preference

+ Why? - It has large industry backers

(CentOS-Stream has IBM, Oracle has Oracle and Amazon is also supporting Rocky)

+ CloudLinux team is behind this. Obviously for selfish needs as well as community altruism.

(=RedHat was never a zealous-puritan in giving everything away for free either)

+ They got there first!
Rocky Linux

+ Seems genuinely good and stable

+ It feels like CentOS again. Personally, I’m unhappy with the CentOS purchase by RH in the first place, as I know a few people in the community are.

+ If the community shifts this way they unofficially ‘support’ migrating from other alternative CentOS compatible systems.