Linux Distribution and Ecosystem Evolution in Control Systems Workshop

https://indico.cern.ch/event/1084050/

Federico Vaga & Thomas Oulevey

2021-10-22 ICALEPCS 21

In numbers !

195 participants registered

~ 50 institutes

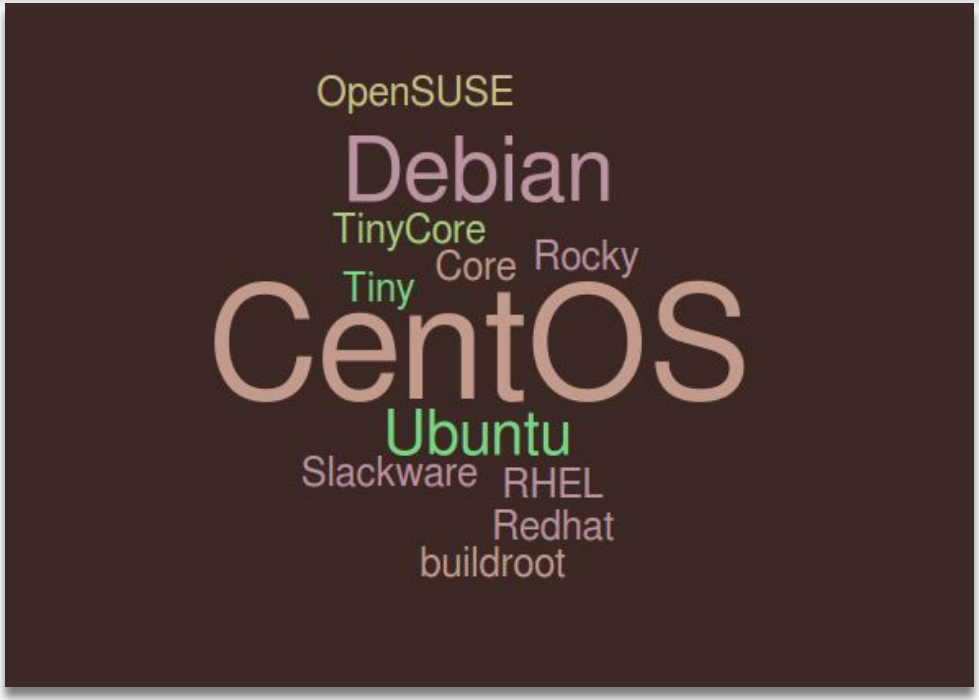
~ 120 participants joined the Zoom Room on Thursday

1 canceled talk

3 sessions

Thanks to our speakers and participants !

Motivation


OpenSUSE
Debian
TinyCore
Core
Rocky
Tiny
CentOS
Ubuntu
Slackware
RHEL
Redhat
buildroot

CentOS

CentOS Stream 8 (CS8) in production at CERN

CentOS Linux 8 will be migrated to CS8 by the end of the year

Joint announcement with CERN/Fermilab/HEP community being drafted

CentOS Board members AMA
Thanks Tru Huynh !

- For servers and workstation CentOS stream (8 and next) will be the recommended distribution at CERN
- Investigation on a wider use of Red Hat Enterprise Linux through Academic licenses offer
- Community is evaluating other rebuilds like Rocky Linux and Alma Linux
- After “CentOS 8” is not set in stone and evaluation will continue.

Linux distributions in Controls

CERN want to redesign workflow to accommodate newer technologies and improve development and deployment

On going evaluation at CERN for industrial PC Operating systems (Q2 2022)

Distribute Software Development Kit to simply development

- Interest in how software will be delivered/installed (Gitlab worflow, flatpak, containers, ansible) and related security challenges
- Important to have a clear way to redistribute OS images (For CI/CD, Outside the lab, different installation media)

What's new in the Linux distribution ecosystem

A gentle introduction to Nix and NixOS

Few Words on rpm-ostree used by Fedora Silverblue and Fedora CoreOS to achieve atomic updates with RPM packaging

- Interest in application packaging (conda, Nix, containers)
- CEA: plan to look at Nix to packages EPICS and dependencies

Thanks!

Indico Link :
https://indico.cern.ch/event/1084050/

Video recording :
https://space.bilibili.com/380563265

Chat room :
https://app.element.io/#/room/!WUcEqOuBExRmSZVIFI:matrix.org

Thanks to our CEA Saclay colleagues for creating it !