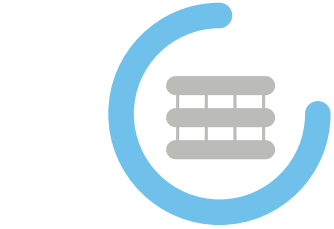

Meeting of the Technical Steering Committee (TSC) Board

Wednesday, Apr 19th, 2023
11:00am ET

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THE LINUX FOUNDATION

Agenda/Updates

- Announcements, upcoming talks and deadlines
  - ISC BoF scheduled for Monday, May 22nd 4 PM (Europe/Berlin)
    - Chris S., Adrian, and David
  - PEARC BoF deadline May 12th
    - Chris S., Jeremy
    - Anyone else going to PEARC?
  - SC BoF deadline Jul 7th
    - Who is planning to attend?

- Rocky Linux SIG
- Mentorship program
- Release updates
- New CI Hardware discussion

Rocky Linux HPC SIG

- Greg K @ CIQ wants to form an ~~O~~HPC special interest group within the Rocky Linux project
- https://wiki.rockylinux.org/special_interest_groups/sig_guide/
- OpenHPC release tarball in the Rocky repos and will work similar EPEL

```
$ dnf -y install ohpc-release
```

- Linux scheduler optimization for HPC workloads
- Lustre support

OHPC Mentorships

- Do we want to have a mentorship program this summer / fall?
- We are running a bit behind to do them this summer
- Possible Topics
  - Warewulf4 documentation
  - Porting of software stack to Debian (UMass offered to mentor and will find a mentee)
- SC23 travel discussion for mentees

Release Updates

- serial netcdf? do we want to introduce it?
- adios2 has been imported into git
- Intel compiler and 2.7
  - do we want to rebuild everything with the intel compiler in 2.7 with a hard dependency on a specific version of the intel compiler?
  - Currently we have a version of 2021 as the minimum version which is too old for some rebuilds in 2.6.
- PMIx needs to be reenabled in SLURM
- UCX
  - Current version is provided by OHPC and is a bit old (1.11)
  - A bug has been reported by our Lenovo colleagues
  - Upstream distros have a newer version
  - Do we want to update the OHPC version or use distro provided UCX?

Release Updates Cont.

- new signing key for OBS-build packages has been created and expired 3.14.45
- Still need to switch to the new clang-based backend for Intel compilers
- increase the optimization baseline to x86-64-v2 for 3.0?

In the summer of 2020, AMD, Intel, Red Hat, and SUSE collaborated to define three x86-64 microarchitecture levels on top of the x86-64 baseline. The three microarchitectures group together CPU features roughly based on hardware release dates:

- **x86-64-v2** brings support (among other things) for vector instructions up to Streaming SIMD Extensions 4.2 (SSE4.2) and Supplemental Streaming SIMD Extensions 3 (SSSE3), the POPCNT instruction (useful for data analysis and bit-fiddling in some data structures), and CMPXCHG16B (a two-word compare-and-swap instruction useful for concurrent algorithms).
- **x86-64-v3** adds vector instructions up to AVX2, MOVBE (for big-endian data access), and additional bit-manipulation instructions.
- **x86-64-v4** includes vector instructions from some of the AVX-512 variants.

  - RHEL9 uses it and presumably Rocky and other RHEL clones
  - Do we also want to do it for Leap and OpenEuler? Not sure they require it or if it breaks use cases there

- Openeuler needs the right latex dependencies for our recipe builds.
- Karl has started testing the 3.0 factory with Rocky 9.1; SUSE Leap 15.4 is next

New CI hardware discussion

- How to proceed to get these integrated with GitHub, Jenkins, and OBS?
  - ARM systems provided by Huawei / OpenEuler
  - X86_64 systems provided by Lenovo