

Techlab benchmarking web portal

Wednesday, 16 May 2018 15:00 (20 minutes)

Techlab, a CERN IT project, is a hardware lab providing experimental systems and benchmarking data for the HEP community.

Techlab is constantly on the lookout for new trends in HPC, cutting-edge technologies and alternative architectures, in terms of CPUs and accelerators.

We believe that in the long run, a diverse offer and a healthy competition in the HPC market will serve science in particular, computing in general, and everyone in the end.

For this reason, we encourage the use of not-quite-there-yet alternatives to the standard x86 quasi-monopoly, in the hope that in the near future, such alternative architectures can proudly compete, on an equal footing. We buy hardware, set it up, test and benchmark it, then make it available to members of the HEP community for porting and testing their scientific applications and algorithms. On a best-effort basis, we try and help users make the best out of the hardware we provide.

To serve as basis for hardware choice, we run extensive benchmarks on all the systems we can get our hands on, and share the results to help others make fully informed choices when buying hardware that will fit their computing needs. As a means to achieve this, we developed a benchmarking web portal, open to everyone in the HEP community, to upload and publish data about all kinds of hardware. It was built with security in mind, and provides fine-grained access control to encourage even people working on yet-unreleased hardware to contribute.

As Techlab cannot possibly buy and test everything, it is our hope that this portal gets used by other HEP labs, and the database we build together becomes the ‘one-stop shop’ for benchmarking.

This presentation both gives an overview of Techlab’s benchmarking web portal —what and whom it is designed for, what we hope to achieve with it —and delves into the technology choices of the implementation.

Desired length

20

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