

WLCG HEP-SCORE Deployment Task Force

Meeting on 6 July 2022 at 15:00 h UTC (teleconference)

Notes

Indico event page: <https://indico.cern.ch/event/1171342/>

Welcome, note-taking, notes from previous meeting, matters arising

The minutes from the previous meeting are approved. Thanks to Oxana Smirnova for preparing them.

Status of workload (Domenico Giordano)

ATLAS reco workload triggered investigating discrepancies between wall time and cpu-time. Reviewed workloads from different experiments and presented table with results reported (wall time, cpu time). Problem with ATLAS simMT and recoMT workloads (score should be proportional to execution time, not cpu time, to avoid misleading score due to overcommitted resources) fixed. New version (1.0) not affected by this problem.

New version of Alice gen-sim-reco (v.0.6) produces a different score when compared to old version (v.0.4)—likely due to use of different simulated processes—still investigating, but recommend to stay with v0.4 for now. Stefano Piano suggested move to v0.6 and drop v0.4—to be discussed.

Perf-based study of workloads – V. Innocente agreed to study all 10 workloads with perf.—results will be presented at September workshop. Feedback from early studies generated a few questions to ATLAS and CMS representatives.

Conclusion of the benchmarking campaign (Gonzalo Menendez Borge)

Gonzalo reported campaign is finished. Most sites have finished all scripts (though some lack SPEC17 licenses). Any results still pending are welcome to be reported (specially for sites still running scripts). Follow-up emails per site will be sent. Updated table presented showing significant progress.

Briefly discussed final set of workloads that will compose the new benchmark.

Draft agenda of the Workshop (Domenico Giordano)

2-day workshop on 19 and 20 September. Agenda to be ready in coming days and to be announced at GDB on 13 July. Expect TF members, WG members and software experts from experiments, GDB, HEPIX members, etc to attend. Meeting clashes (CMS week and C-RSG meeting were used as examples) have been noted, and may limit participation. Goal of workshop is to discuss optimal configuration of new cpu benchmark (based on HEP experiments) to replace HS06 and identify final candidate benchmark.

Workshop will also describe workloads provided and expected software evolution, how to benchmark cpu+gpu systems and obtain input from Accounting WG on how migration will be carried out on its portal.

Domenico presented the draft agenda. Start with HEP-SCORE overview and potential candidates for new benchmark on Monday AM. Monday PM will have extensive presentation of experimental workloads and experience of data centers with the benchmark suite. Tuesday AM will see presentations on gpu's, ML, grid, HPC and also (electrical) power consumption. Tuesday PM will focus on integration of HEP-SCORE with accounting and a discussion of “golden” candidates for HEP-SCORE.

Helge emphasized that meeting clashes will impact several participants and called for flexibility with regards to agenda scheduling to encourage maximal participation. However, dates should not be changed, given all the constraints.

HEPscore Survey review [II](#) (Randall Sobie)

Randall reported 10 (out of 24) participated in survey. Results showed support for new benchmark with mixed opinions on the composition of the new benchmark. Most prefer a benchmark that runs several hours (3-6 hours) and with a validity of several years (one LHC beam period or longer). No strong consensus on whether to use only latest cpu architectures or include older ones. Most respondents prefer continued voluntary support and operations by HEPIX WG (others would like CERN IT and/or WLCG to step in). Survey also showed support for a fast version of HEP-SCORE (30 min or less) and for a benchmark configuration for cpu+gpu workloads in 1-2 years.

Domenico asked about appending survey comments (to minutes? Indico agenda?) is a good idea. No concerns were expressed.

Any other business

Next meeting – take a break for several weeks during the summer. Meet again on Aug. 24 (not one of the traditional weeks for TF meetings, so participants are encouraged to note it on their calendars).

Annex: Attendance

Present:

Domenico Giordano (CERN; notes)
Michel Jouvin (IJCLab)
Helge Meinhard (CERN, chair)
Gonzalo Menendez Borge (CERN)
Stefano Piano (INFN Trieste)
Xiao Fei Yan (IHEP)
Oxana Smirnova (U Lund)
Randall Sobie (U Victoria)
Tony Wong (BNL)

Apologies:

Walter Lampl (U Arizona)
Matthias Schnepf (KIT)
Andrea Valassi (CERN)