

# WLCG HEP-SCORE Deployment Task Force

## Meeting on 07 September 2022 at 15:00 h UTC (teleconference)

### Notes

Indico event page: <https://indico.cern.ch/event/1171462/>

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

The minutes from the previous meeting are approved. Thanks to Tommaso Boccali for preparing them.

#### HEPscore candidates: preliminary results (T. Sullivan)

See slides for details about how HS06 and HEPscore scores are computed

11 available workloads: 3 from ATLAS; 3 from CMS; 1 ALICE; 1 LHCb; 1 Belle II; 1 JUNO; 1 GW

Currently requires ~15h to run all the workloads 3 times: much more than the goal of ~3h...

- Need to find criteria to remove some workload: too much dissimilarity for example like JUNO requiring more than 2 GB/core
- Figure of merit computed by comparing the workload run time to the average
  - JUNO and GW are far from the average: proposal to remove them

2 workloads (ATLAS sim\_mt + ALICE one) are long to run and don't influence the average

- After their removal, the 7 remaining workloads require 6 hours

Weights: 2 approaches

- Experiment equally
- Grid share
- Both approaches gives not very different FOM compared to average (grid share a little bit closer to average)
- Another approach to test would be by job type but where find the fraction

Bernd: potential problem with excluding ALICE and with LHCb being only one WL with a small influence on the score, these 2 experiments may feel this benchmark is just another arbitrary one

- How to get the support of these experiments without sacrificing the time required to run the benchmark

Helge

- Can we tune the number of events per workload to reduce the run time maintaining stable results
- Why GW and JUNO were excluded exactly?

Domenico

- JUNO and GW don't saturate the machines so their results are not totally representative
  - They have requirements slightly different from other WLS

- Events per WLS: already tuned but could be revisited. Anyway some WLS are long to run.
  - Tristan: some WLS already a couple of events

Helge: removing a WL because it is not saturating the machine is not necessarily a good argument: it represents how it works in the real world

Domenico : it may be dangerous to include a WL that behaves differently than the average and for which we don't have a strong baseline, for example by looking at grid figures

Michel

- Inserting a WL not saturating the machine is risky as it means it depends on things we don't identify/control well
- What about proposing to keep these WLS out of the first version of the benchmark but to continue to run them
- in the background to be ready to insert them in a future version

Helge/Randy: goal of a 3h runtime is indicative, running 12h is not impossible if bringing something to the benchmark, just need to have good reasons

- Bernd: if we need 12h instead of 6h, we probably have a problem... at least need to well understand why
  - Average runtime of jobs in CERN batch queues is ~5h
  - Should avoid exceeding one working day of runtime

Domenico: would be good if Tristan could produce a plot of FOM for the 11 workloads similar to the plot with 7 workloads

## HEPscore Workshop preparation (Domenico Giordano)

Starts Monday at 9h

- Conflict with C-RSG solved
- Agenda finalized: <https://indico.cern.ch/event/1170924/>

~30 registered people with 15 at CERN

Guidelines for presentations are available and have been updated recently: please be sure to check them

Michel: need to have in mind the next WLCG workshop, mid-November @Lancaster

- Would be good to present decisions and next steps, rather than questions

Discussion on the final WLS list will be at the core of the workshop: wait the outcome of the workshop to understand if we converge or not: all the players will be at the workshop

Helge proposal for benchmark adoption by WLCG

- mid-Sept.: Workshop: converge on final WLS list
- Oct. GDB: workshop report
- mid-Nov.: wider discussion at WLCG workshop
- mid-Dec.: adoption by MB

## Any other business

### Next meeting

Helge proposes to have a short meeting after the workshop, on the 21th, (instead of cancelling it) to debrief the workshop and decide the next steps

- Tony: may be a problem for non-European flying back on Wednesday
- Helge proposes to start meeting every week on the 28th

Decision: all TF members requested to reserve the usual slot every week starting Sept. 28

- Sept. 28 will be mainly devoted to workshop debriefing

## Annex: Attendance

### Present:

Domenico Giordano (CERN; notes)  
Michel Jouvin (IJCLab)  
Walter Lampl (U Arizona)  
Helge Meinhard (CERN, chair)  
Bernd Panzer-Steindel (CERN)  
Oxana Smirnova (U Lund)  
Randall Sobie (U Victoria)  
Tristan Sullivan (U Victoria)  
Tony Wong (BNL)

### Apologies:

Stefano Piano (INFN Trieste)