

# WLCG HEP-SCORE Deployment Task Force

Meeting on 03 March 2021 at 15:00 h UTC (teleconference)

## Notes

Indico event page: <https://indico.cern.ch/event/992805/>

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

Special welcome to Jingyan and Xiaofei joining the meeting next to Fazhi.

No comments on minutes from previous meeting.

### Update on accounting (Ian Collier)

Most sites include benchmarks as part of APEL accounting records. Brief discussion of a few ways to include HEP-SCORE, leaning towards adding new field entry for new benchmark (can be used to compare old vs. new benchmarks). Next steps are to estimate effort/time and discuss with WLCG/EGI about updating publishing systems. Tommaso asked about retaining granular information on benchmarked hardware in the new schema. Ian replied generational information is available (not on individual node basis). Focus is on a sustainable (scalable?) schema to allow future additions (GPUs etc.).

### IHEP experiments' workload(s): status and plans (Yanfei Yan)

Xiaofei discussed activities at IHEP: BES-III (e+e- experiment at BEPC), Juno (neutrino experiment) and HEPS (Photon Science). HEPS construction is expected to be completed in 2024. BES-III and HEPS will require both cpu and gpu for computing. Benchmarks needed to gauge computing needs and pledges. Next steps are to package and containerize workloads for tests and certification. Helge remarked that BES-III operates in the same range as Belle-II, so instructions are probably available to upload experimental benchmarks to CVMFS. Andrea believes instructions are posted, but will wait for Domenico for confirmation.

### Number of threads per copy in benchmarks (Manfred Alef)

Manfred states that in typical WLCG environments, multi-core jobs are assigned 8 cores, but there are other systems with more (or less) cores. HEPIX benchmarking WG suggests a default of 4 threads per copy. Table displayed with ATLAS and CMS workload results, ranging from 4 to 64 copies with 4 to 10 threads per copy. No significant differences between 4 or 8 threads per copy (brief mention of outlier with ATLAS Digi Reco on AMD EPYC), and no swapping detected when running on nodes with more than 2 GB/core, and therefore propose to stay with default of 4 threads/copy. There was a brief discussion (Manfred, Tomaso, Stefano) about mixing 4 and 8-node jobs and memory/core. Walter/Domenico/Helge further discussed the anomalous results from the ATLAS Digi-Reco run. The Digi-Reco may not be a reliable measurement, question whether to include it in further investigations.

### Any other business

## Next meeting

Wed 17 March at 15:00 h UTC (16:00 h in Geneva) – Helge noted it is in conflict with HEPIX, but propose to keep this time slot to maintain progress. Storage & Filesystems track is scheduled for the HEPIX Wednesday afternoon, so the topic overlap is not expected to be an issue.

## Annex: Attendance

### Present:

Manfred Aef (KIT)  
Tommaso Boccali (INFN Pisa)  
Ian Collier (STFC)  
Alastair Dewhurst (STFC-RAL)  
Domenico Giordano (CERN)  
Michel Jouvin (IJCLab)  
Walter Lampl (U Arizona)  
Helge Meinhard (CERN, chair)  
Andrew Melo (Vanderbilt U)  
Gonzalo Merino (PIC)  
Bernd Panzer-Steindel (CERN)  
Stefano Piano (INFN Trieste)  
Fazhi Qi (IHEP)  
Oxana Smirnova (U Lund)  
Randall Sobie (U Victoria)  
Andrea Valassi (CERN)  
Tony Wong (BNL, notes)

### Invited:

Jingyan Shi (IHEP)  
Yanfei Yan (IHEP)

### Apologies:

Jeff Templon (Nikhef)