Next Steps

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Benchmarking Working Group

Agreed Benchmarking tool:

➔ **CERN Cloud Benchmark Suite** [1]
to run several (fast) benchmarks and to collect results at single place

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CERN Cloud Benchmark Suite

➔ Benchmarking cloud environments:

- No known issues when running in cloud environments where user has root permissions
- The possibility to send benchmark results to a single central store for later analysis is a very helpful feature

- **You can already start to run the fast benchmarks in cloud environments using this tool**
  - Please, report issues to the mailing list!

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CERN Cloud Benchmark Suite

➔ Benchmarking in traditional batch farms:

- Issues identified (dependencies, licensing, load on data collector)

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➔ Benchmarking in traditional batch farms:

- Dependencies:
  - We should run the benchmarks in various batch farms
    - ✔ Different site-specific WN setups (HT, turbo boost, # job slots, …)
  - Batch systems don’t grant root permission to jobs, benchmarking tool must either run in userspace, or using default packages
  - Suggestion: add suite to HEP_OSLIBS meta package to make it available on all WLCG WNs

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CERN Cloud Benchmark Suite

➔ Benchmarking in traditional batch farms:

- Licensing:
  - The CERN Cloud Benchmark Suite as well as the benchmarks are under free licenses …
  - … except some Atlas extensions of the KV tool
  - Atlas management is discussing licenses but not there yet

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- ➔ Benchmarking in traditional batch farms:
  - Licensing:
    - Suggestion:
      - ✔ Exclude KV from list of candidates (and from CERN Cloud Benchmark Suite → Atlas KV extension pack)

        Presentations by Domenico Giordano [1] and by Manfred Alef [2] have demonstrated good correlation between KV (Geant4 single muon generation) and Dirac fast benchmark.

      - ✔ Atlas members should run both benchmarks and report possible odd findings

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- ➔ Benchmarking in traditional batch farms:
  - ES data collector:
    - The current release of the CERN Cloud Benchmark Suite cannot run in parallel
      - ✔ Design choice

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➔ Benchmarking in traditional batch farms:

- ES data collector:
  - Experiments are already collecting job performance measurements into their own accounting systems (MonALISA, BigPanDA, …) for later analysis
  - Suggestion: include fast benchmark results
  - Offline mode doesn't touch central ES server, therefore no impediment to multiple runs

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➔ Benchmarking in traditional batch farms:

- **Wait for new release of the suite?**

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References:

[1] https://indico.cern.ch/event/535458/contributions/2176092/attachments/1284582/1909948/CERNCloudBenchmarkSuite_HEPiXBmkWG_giordano.pdf

[2] https://indico.cern.ch/event/540544/contributions/2195585/attachments/1293823/1928227/Fast-Benchmarks-2016-06-17.pdf