



LUMI and HPC status summary

Tomas Lindén¹,

 HIP^1



07.11.2024

NLCG meeting, 7th of November 2024, hybrid

Contents





1 LUMI and HPC summary

HESINING HISTITUTE OF PHISICS

LUMI and HPC summary



CSC on CVMFS installation on LUMI

- LUMI will be in use at least until the end of 2026
- CSCS Alps RADOS blockdevice solution is being considered. CSC contacted CSCS
- Non-trivial features needed for this not enabled on LUMI-O by HPE/CSC
- No decision yet by CSC, so outcome is unclear

CSC next Finnish HPC environment Roihu

- The Roihu procurement is currently ongoing
- HIP as urged CSC to provide a node local storage solution for Roihu
- Pekka Lehtovuori has acknowledged this need and it is being considered



LUMI and HPC summary



CMS GPU usage of LUMI in the project Exploring the Use of AMD GPUs for High Performance Computing in the CMS Reconstruction

- Port part of CMSSW CPU-code to the AMD MI250X GPU:s
- A. Ramirez talk at CERNVM Workshop 16.-19.9. 2024 https: //indico.cern.ch/event/1347727/contributions/6119796/ attachments/2929267/5143449/CVMFS-CMS-AValenzuela.pdf
- A. Bocci talk at CHEP 2024, https://indico.cern.ch/event/1338689/contributions/ 6010019/attachments/2951626/5188646/A.%20Bocci%20-% 20Experience%20with%20the%20alpaka%20performance% 20portability%20library%20in%20the%20CMS%20software.pdf

LUMI usage in ATLAS using fat containers

Czech Tier2 group is running some workloads on LUMI in this way,



LUMI and HPC summary



EU HEP HPC strategy workshop in Ljubljana, September 5th-6th 2024

- Indico agenda for the meeting https://indico.cern.ch/event/1436114
- Next meeting January 30 and 31 2025 at CERN

HELSINKS HESTITUTE OF PHYSICS

LUMI and HPC summary



LUMI Pilot Project

- levgen Sliusar UiO started his ATLAS Qualification Project in January 2024
- A tool for unnesting nested containers with cvmfsexec
- Using ARC ssh submission and sshfs on ARC-CE on cPouta cloud
- Has run more than 1,5 k SIM-jobs on Puhti development environment
- LUMI demonstration needs some more work
- To be tested also for CMS
- Presentations at ATLAS Computing Week and CMS Offline Software and Computing Week
- I. Sliusars CMS O&C Week talk is attached to the agenda of this meeting.
- Could be a generic approach for ATLAS, CMS? HPC workloads