

What else?

A brief discussion about what else LUST offers, what is not covered in this course, and how you can learn about it.

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What did we not cover?



- For several topics, this course gave only a brief overview with many details omitted
- General topics not covered at all:
 - Guidelines for writing HPC-friendly code
 - Debugging and profiling tools
 - Developing (portable) code for GPU and optimising that code
- And it is not a very domain-specific course (well, the domain is "LUMI supercomputer" and not CFD or molecular dynamics or AI)

LUST trainings



- Introductory training: Basically this training...
- Advanced training and "Performance Analysis and Optimisation workshop"
 Oriented towards traditional HPC:
 - Mostly given by HPE and AMD experts
 - Covers also debugging and profiling tools, and a bit about writing HPC-friendly code
 - Some topics of this course covered in more depth
 - On-site recommended for contact with HPE and AMD experts
- AI on LUMI: Workshop-style training on AI
 - Next edition still to be planned (there was one 2 weeks ago in Stockholm)
 - On-site necessary for the full experience

Other trainings



- PRACE coordination is no more, EuroHPC is starting up <u>EVITA</u>
 - For now overview on the <u>HPC in Europe Portal</u>
 - Courses about tools, about programming paradigms, ...
- AMD provides trainings in Europe from time to time
 - Latest edition was a course for HLRS in April 2024
 - Excellent materials from a <u>course at ENCCS</u>, with <u>recordings on YouTube</u>
- LUMI consortium countries also organise courses from time to time
 - E.g., in January 2024 there was a GROMACS course at CSC in collaboration with <u>BioExcell</u> and the EuroHPC national competence centres of Finland and Sweden
 - Some of those courses are also announced on the LUMI web site
- AI: Not clear yet what the "AI Factories" and MINERVA will provide

Other LUST services



- Yearly "hackathon": No specific theme, but for optimisation of your code with the help of experts from HPE, AMD and LUST
 - One week, so a clear goal is needed
 - Next one in the December in Lugano (but full)
- Porting call: When resources allow, we also launch a call for assistance in porting code
 - Assitance = you guarantee availability of people in the time window
 - Help from experts at HPE, AMD and LUST
 - Selection partly based on potential impact of the code
- Monthly virtual user coffee break
 - Usually last Wednesday of the month
 - Sometimes with a short presentation
 - Experts from HPE and AMD also present

Other support services



- Check with your local organisation as some have support programs
- EPICURE program (<u>epicure-hpc.eu</u>)
 - Larger support projects: 1-3 personmonths from EPICURE, and expect a similar effort from the applicant during that period
 - Need a EuroHPC project, but a development project is enough
 - Can go from optimising a complex software installation, to help with optimising and porting your own codes for EuroHPC supercomputers
 - Don't expect domain knowledge about every science domain and all software packages!
- Something coming up from MINERVA and/or the AI factories?

LUMI web sites



- Main LUMI web site at <u>lumi-supercomputer.eu</u>
 - Links to information on obtaining an allocation and to training events
- Documentation split in three:
 - <u>docs.lumi-supercomputer-eu</u>: Everything except documentation that is very specific to a single package
 - <u>LUMI Software Library</u> at <u>lumi-supercomputer.github.io</u>: Package-specific information for all software for which we have some support
 - <u>LUMI AI Guide</u> at <u>github.com/Lumi-supercomputer/LUMI-AI-Guide</u>
- <u>LUMI training materials</u> at <u>lumi-supercomputer.github.io</u>: Archive of past LUMI trainings and user coffee break presentations
 - Not all materials online, some only available on LUMI
- Some local organisations have documentation that is relevant to LUMI
 - We link to it if it is a real addition to our materials and we know about it

