Introduction to LUMI for Exercises

Georgios Markomanolis

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LUMI notes

- You should have gotten an invite to participate in the workshop
  - Problems, contact support: https://lumi-supercomputer.eu/user-support
- LUMI docs -- https://docs.lumi-supercomputer.eu
- Project – project_465000380
  - Check with 'groups' command
- LUMI has recently been upgraded to the LUMI/22.08 software stack
  - Cray software base version is now 22.12
  - ROCm is version 5.2.3
  - GCC is version 11
  - Clang/LLVM is version 14

  File spaces
  - /project/project_465000380/ -- project files such as exercises, slides, software
  - /scratch/project_465000380/<user_id>/ -- working directory

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Logging into LUMI

- Accessing LUMI
- ssh USERNAME@lumi.csc.fi

- To simplify the login to LUMI, you can add the following to your .ssh/config file.

- # LUMI
- Host lumi
- User <USERNAME>
- Hostname lumi.csc.fi
- IdentityFile <HOME_DIRECTORY>/.ssh/id_rsa
- ServerAliveInterval 600
- ServerAliveCountMax 30

- The ServerAlive* lines in the config file may be added to avoid timeouts when idle.

- Now you can login with ssh USERNAME@lumi

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Resources for Workshop

- Workshop has been assigned the account project_465000380
  - Add "`-A project_465000380`" to `salloc` or `batch` commands

- `Use the small-g slurm queue`
  - `Supports a sub-node allocation – sharing the node with other jobs`
  - `Use --gpus # to get the gpus that you need`
  - `Use --ntasks=# for the number of CPUs needed`
  - `If you experience problems with temp dir conflicts, you can redirect your temporary files to another directory. Either of these will work`
    - `export TMPDIR=/tmp/<username>`
    - `export TMPDIR=$HOME/tmp`

  `Work in the /scratch/project_465000380/<userid> to avoid space issues`

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Exercise Resources

- HPC Training Examples are available
  - At https://github.com/amd/HPCTrainingExamples
  - Locally at /project/project_465000380/exercises

- Omnitools are installed in the projects directory -- /project/project_465000380/software

- Slides from these presentations are at /project/project_465000380/slides

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