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The essence of today's course is to help users to understand the difference and move from local machines (desktop, laptop, workstation) to one of the supercomuters of SCC (UC3=bwUniCluster or HoreKa).

You need separately a program to copy files from/to the supercomputer. For this you may use WinSCP (windows), MobaXterm (windows), filezilla (linux) etc. You also need a tool to type the commands (called terminal) – this can be e.g. PuTTY, or a local linux partition on your local computer. There are many different ways of doing those tasks, we cannot list all of them here.

Local computer: Serial computations

1. Install openFOAM

2. Use local HDD

3. Start directly: pimpleFOAM

Supercomputer: parallel simulations

1. "module load …" + foamInit

2. Use workspaces

3A. decomposePar (for parallel jobs)

3B. Edit a job-file and submit a job to one of the queues

3C. **Do not use the Allrun script** in case of large parallel runs! Grid generation is not parallelized and Allrun is very bad for large cases. Use the steps we teach you today!

4A. reconstructPar (optional but recommended)

4. View in ParaView

4B. Copy locally and view in ParaView