

Glossary

- **HPC** High Performance Computing. You can do that on an HPC cluster.
- **Baobab** This is the name of our HPC service, as well as the name of our first HPC cluster.
- **HPC cluster** Our compute infrastructure, composed by a bunch of compute node, some storage, at least one head node, all that part of a network
- **CPU** Central processing unit. It's the main computing unit of every computer. It runs the OS as well as the various programs you execute.
- **Core** Modern CPU contains many cores. You can see each core as a computation unit.
- **GPU** Graphics Processing Unit. Co-processors originally designed for graphic rendering. They are now widely used to do general purpose computing.
- **RAM** Random Access Memory. This is a fast memory that is used to store programs and related data while they are executed.
- **Network interface**. The piece of hardware that allows each computer (or node) to exchange data with each other through a network.
- **Batch** When you want to launch a software with a program (Stata with a script), you do it in batch mode.
- **Head node** The head node, or login node is the entry point for the users. You connect to the head node to have access to the cluster.
- **Interactive** When you want to launch a software like you would do on your own computer and be able to interact with it. It's not good to do that on clusters, because as you are working on your software, there are many time when the compute node is just waiting doing nothing.
- **Job** your program executed against your data on a resource.
- **Node (compute)** A server of the cluster, where the actual computation is made.
- **Partition** In Slurm, the compute nodes are grouped by partitions. Each partition can have different characteristics.
- **Resources** for example the CPUs, memory, disks.
- **Scheduler** As the cluster is shared between users, when you want to use a resource on the cluster, the scheduler is responsible to allocate the resources you ask to you. If the resources aren't available, (already allocated to another job) the scheduler will put your job in a queue and allocate you the resources later.
- **FLOPS** FLoating-point Operations Per Second
- **Scratch space** a space on a hard disk drive that is dedicated for storage of temporary user data. It is unreliable by intention and has no back up.

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