First steps on the clusters

This page explains what to do after having successfully connected to one of the clusters.

Step-by-step guide

1. What is installed on the clusters

To see the list of installed software (modules), load the compiler and the MPI implementation you intend to use and do

`module spider`

2. Getting the examples

Once you have logged in to the machine, we suggest you download the examples with the command:

`git clone https://c4science.ch/diffusion/SCEXAMPLES/scitas-examples.git`

Here is a list of our examples:
3. Running the examples

Enter the directory scitas-examples and choose the example to run by navigating the folders. We have three categories of examples: Basic (examples to get you started), Advanced (including hybrid jobs and job arrays) and Modules (specific examples of installed software).

To run an example, e.g. HPL-mpi of the Advanced category, do:

```
sbatch --partition=debug hpl.run
```

or, if you do not wish to run on the debug partition,

```
sbatch hpl.run
```

4. Running interactive jobs

An interactive job allows you to connect directly to a compute node and type commands that run on the compute node. Simply type the command `Sinteract` from the login node to start an interactive session with 1 core and 4GB of memory for 30 minutes.

You can use the parameters to `Sinteract` (for help type: `interact -h`) to request more resources or more time.

options:
- `c` cores cores per task (default: 1)
- `n` tasks number of tasks (default: 1)
- `t` time as hh:mm:ss (default: 00:30:00)
- `m` memory as #[K|M|G] (default: 4G)
- `p` partition (default: parallel)
- `a` account (default: phpc2017)
- `q` qos as [normal|gpu|gpu_free|mic|...] (default: )
- `g` resource as [gpu|mic][:count] (default is empty)
- `r` reservation reservation name (default is empty)

e.g., to run an mpi job with 16 processes for one hour using 32 GB of memory on a debug node:

Sinteract -n 16 -t 01:00:00 -m 32G -p debug

Related articles
- First steps on the clusters
- Ask for help
- Connecting to the clusters
- Using software on the SCITAS clusters