

General information

Modules

Based on the requirements by the DEEP applications several software tools have already been installed on the DEEP system. To see which modules are available use

module avail

For most tools and compilers there are several versions available, you can list the different versions of a specific tool with `module avail ?tool name?`, for example

```
-bash-4.1$ module avail intel
----- /usr/local/modulefiles/COMPILER -----
intel/13.0.4      intel/14.0.3      intel/15.0        intel/15.2.164    intel/16.0        intel/16.2(default) in
```

You can load a specific version or just use the default with for example

module load intel

The modules which are currently loaded can be listed with the command `?module list?`. To unload a module just type `?module unload?` followed by the name of the module.

Compiler

There are several compilers available, but as it is highly recommended to use the Intel compiler on the KNC system it might be best to also use it on the DEEP system.

Installed compilers:

- Intel compiler: `module load intel`
- GNU compiler: `module load gcc`
- PGI Compiler: `module load pgi`

Profiling and analysis tools

VTune: `module load VTune`

Extrae: `module load UNITE extrae`

Scalasca: `module load UNITE scalasca`

MPI programs

It is recommended to start parallel MPI Jobs on the DEEP Cluster using the `mpiexec` from the [ParaStation?](#) MPI installation. Generally all MPI implementations using PMI are supposed to work with the [ParaStation?](#) `mpiexec`. For instance you can compile your application using Intel MPI and launch your job with `mpiexec` from Parastation. The Intel `mpirun` will not work.