

Customizing Your Environment with the Module Command with Imod

Each user can customize their environment using the *module* command. This command lets you select software and will source the appropriate paths and libraries. All the requested user applications are located under the */opt/apps* directory.

To list what applications are available, use the *spider* sub command:

```
$ module spider

-----
The following is a list of the modules currently available:
-----

GCC: GCC/4.8.3
  The GNU Compiler Collection includes front ends for C, C++,
  Objective-C, Fortran, Java, and Ada, as well as libraries for these
  languages (libstdc++, libgcj,...). - Homepage: http://gcc.gnu.org/

OpenMPI: OpenMPI/1.8.4
  The Open MPI Project is an open source MPI-2 implementation. -
  Homepage: http://www.open-mpi.org/

icc: icc/2015.2.164
  C and C++ compiler from Intel - Homepage:
  http://software.intel.com/en-us/intel-compilers/

iccifort: iccifort/2015.2.164
  Intel C, C++ and Fortran compilers - Homepage:
  http://software.intel.com/en-us/intel-cluster-toolkit-compiler/

ifort: ifort/2015.2.164
  Fortran compiler from Intel - Homepage:
  http://software.intel.com/en-us/intel-compilers/

impi: impi/5.0.3.048
  The Intel(R) MPI Library for Linux* OS is a multi-fabric message
  passing library based on ANL MPICH2 and OSU MVAPICH2. The Intel MPI
  Library for Linux OS implements the Message Passing Interface, version
  2 (MPI-2) specification. - Homepage:
  http://software.intel.com/en-us/intel-mpi-library/

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To learn more about a package enter:

  $ module spider Foo

where "Foo" is the name of a module

To find detailed information about a particular package you
must enter the version if there is more than one version:
  $ module spider Foo/11.1
-----
```

To see a description of a specific package, use the *spider* sub command again:

```
$ module spider OpenMPI/1.8.4
```

```
-----  
OpenMPI: OpenMPI/1.8.4  
-----
```

Description:

The Open MPI Project is an open source MPI-2 implementation. -
Homepage: <http://www.open-mpi.org/>

This module can only be loaded through the following modules:

```
GCC/4.8.3  
icc/2015.2.164  
ifort/2015.2.164
```

To load the module for OpenMPI built with the GCC compilers, for example, use the *load* sub command:

```
$ module load GCC OpenMPI
```

To see a list of modules that you have loaded, use this command:

```
$ module list
```

To change to the Intel compiler build of OpenMPI use the *swap* sub command:

```
$ module swap GCC icc
```

Due to MODULEPATH changes the following have been reloaded:

```
1) OpenMPI/1.8.4
```

To unload all of your modules, use this command:

```
$ module purge
```

To make sure a set of modules are loaded automatically at login, use the *module save* sub command:

```
$ module load GCC OpenMPI  
$ module save
```



Sometimes a module will not load without explicit dependencies. The following outlines this "error" and what to do.

```
$ module load Boost
```

```
Lmod has detected the following error:  These module(s) exist but cannot be loaded as  
requested: "Boost"
```

```
Try: "module spider Boost" to see how to load the module(s).
```

```
$ module spider Boost
```

```
-----  
-----  
Boost:
```

```
-----  
Description:
```

```
Boost provides free peer-reviewed portable C++ source libraries. - Homepage:  
http://www.boost.org/
```

```
-----  
Versions:
```

```
Boost/1.54.0  
Boost/1.58.0
```

```
-----  
-----  
To find detailed information about Boost please enter the full name.  
For example:
```

```
$ module spider Boost/1.58.0
```

```
-----  
-----  
$ module load Boost/1.58.0
```

```
Lmod has detected the following error: These module(s) exist but cannot be loaded as  
requested:
```

```
"Boost/1.58.0"
```

```
Try: "module spider Boost/1.58.0" to see how to load the module(s).
```

```
$ module spider Boost/1.58.0
```

```
-----  
-----  
Boost: Boost/1.58.0
```

```
-----  
Description:
```

```
Boost provides free peer-reviewed portable C++ source libraries. - Homepage:  
http://www.boost.org/
```

```
This module can only be loaded through the following modules:
```

```
GCC/4.4.7 CUDA/7.0.28 OpenMPI/1.8.6  
GCC/4.4.7 OpenMPI/1.8.6  
icc/2015.2.164 OpenMPI/1.8.6  
ifort/2015.2.164 OpenMPI/1.8.6
```

```
Help:
```

```
Boost provides free peer-reviewed portable C++ source libraries. - Homepage:  
http://www.boost.org/
```

```
$ module load GCC/4.4.7 OpenMPI/1.8.6 Boost/1.58.0  
$ module list
```

Currently Loaded Modules:

1) StdEnv 2) GCC/4.4.7 3) OpenMPI/1.8.6 4) imkl/11.2.2.164 5) Boost/1.58.0