

# Extræ (main) dependencies

- First check if your system provides!
- **MPI** (OpenMPI, MPICH, Intel MPI, etc.)
  - Extræ needs to be compiled against every implementation you use!
- Everything is optional... but the following are recommended!
  - **Binutils** (Source code information)
    - <http://ftp.gnu.org/gnu/binutils>
  - **libunwind** (Source code information)
    - <http://download.savannah.nongnu.org/releases/libunwind>
  - **PAPI** (Hardware counters)
    - <http://icl.utk.edu/papi/software>
  - **Libxml2** (Allows configuration through extræ.xml)
    - <ftp://xmlsoft.org/libxml2>

# MPI – Find out what's installed

- A default version loaded already?

```
> module list
Currently Loaded Modules:
  1) intel/2017.4   2) impi/2017.4   3) mkl/2017.4
```

- Not loaded but available?

```
> module avail mpi
impi/2017.1           impi/2018.3         openmpi/2.1.3
impi/2017.4 (L,D)    impi/2018.4         openmpi/3.0.0
impi/2017.6           openmpi/1.10.4-apps openmpi/3.1.1
impi/2017.7           openmpi/1.10.4      openmpi/4.0.0
impi/2018.0           openmpi/1.10.7      (D) openmpi/4.0.1
impi/2018.1           openmpi/1.10.7-64
impi/2018.2           openmpi/2.0.2
```

# MPI – Find out what's installed

- Extrae needs to know the root path for the MPI installation

```
> module show impi/2017.4
-----
/apps/modules/modulefiles/environment/impi/2017.4:
-----
whatis("loads the impi 2017.4 environment ")
...
prepend_path("PATH", "/apps/INTEL/2017.4/impi/2017.3.196/bin64")
prepend_path("LD_LIBRARY_PATH", "/apps/INTEL/2017.4/impi/2017.3.196/lib64")
setenv("I_MPI_ROOT", "/apps/INTEL/2017.4/impi/2017.3.196")
setenv("MPI_ROOT", "/apps/INTEL/2017.4/impi/2017.3.196")
```

- Or with a module loaded...

```
> which mpicc

/apps/INTEL/2017.4/impi/2017.3.196/bin64/mpicc
```

# Deps Compilation – Quick Reference (I)

- **Binutils** (Callstack information)
  - <http://ftp.gnu.org/gnu/binutils>

```
> ./configure
  --prefix=<path-to-install-folder>
  --enable-shared
  CFLAGS="-g -O2 -Wno-error"
  CXXFLAGS="-g -O2 -Wno-error"
> make
> make install
> cp libiberty/pic/libiberty.a <prefix>/lib
```

# Deps Compilation – Quick Reference (II)

- **libunwind** (Callstack information)

- <http://download.savannah.nongnu.org/releases/libunwind>

```
> ./configure
  --prefix=<path-to-install-folder>
> make
> make install
```

- **PAPI** (Hardware counters)

- <http://icl.utk.edu/papi/software>

```
> ./configure
  --prefix=<path-to-install-folder>
  CC=gcc F77=gfortran
> make
> make install
```

# Deps Compilation – Quick Reference (III)

- **libxml2**

- <ftp://xmlsoft.org/libxml2>

```
> ./configure
  --prefix=<path-to-install-folder>
  --without-python
> make
> make install
```

# Installing Extrae

```
> ./configure
  --prefix=<path-to-install-folder>
  --with-mpi=<path-to-mpi-root-folder>
  --with-binutils=<path-to-binutils-root-folder>
  --with-papi=<path-to-papi-root-folder>
  --with-unwind=<path-to-libunwind-root-folder>
  --with-xml-prefix=<path-to-libxml2-root-folder>
  --without-dyninst

> make

> make install
```