

Homework HOWTO

bosilca@cs.utk.edu

How to develop ...

- On torc cluster, msc
 - On my home directory /home/bosilca/opt you will find a version of all MPI implementations
 - MPICH2 : mpich2-1.0.0
 - LAM : lam-7.1.1
 - OpenMPI : ompi-class
 - All of these versions support the MPI 2 features required for the homework

MPICH 2 & LAM 7

- Read the man pages
- Google for informations
- If errors use their own bug lists.

Open MPI

- On the next slides I will explain how to use it.
- If any errors bug me directly !!!
- Requirements:
 - Add /home/bosilca/opt/ompi-class/bin to \$PATH
 - Add /home/bosilca/opt/ompi-class/lib to \$LD_LIBRARY_PATH
- Gathering information about the installation
 - ompi_info
- Compile as normally mpicc, mpif77

OMPI: Running a parallel application

- No startup environment aka. MPICH2 or LAM
- You have to provide a hostfile with the same semantics as MPICH
- OR in your home directory create .openmpi directory with a mca-params.conf file inside

OMPI: Running a parallel application

- Add the following line to the mca-params.conf file:

```
llm_hostfile_hostfile=<your home>/openmpi/hostfile
ptl_tcp_if_include=eth0
ptl_tcp_if_exclude=lo,myri0
ptl_base_exclude=gm,sm
```

- Add the machines that you plan to use
/<your home>/openmpi/hostfile
- Then mpirun as usual (eg. mpirun -np 2 ./app)