Configuring sites for MPI

Stephen Childs
Trinity College Dublin

www.eu-egee.org

Overview

- Site configuration issues
- Resource broker and WMS
- YAIM
- Quattor

Why do we care?

- **Why should users care about site configuration?**
  - The more sites that are configured correctly, the more places you can run your MPI code
  - Helpful to have an idea of what is required before talking to site admins

Site configuration

- **The recommended configuration**
  - Shared home filesystem between WNs and CE
  - Use the “pbs” jobmanager not “lcgpbs”
  - Install mpi-start RPM on WNs
  - Install required MPI flavours on WNs
  - Publish mpi-start availability and MPI versions in GLUE RTE
  - Set environment variables on WN describing MPI flavours

- **Modules exist for Quattor and YAIM to do this**

RB/WMS configuration

- **gLite WMS allows jobwrappers to be edited**
  - Can remove hard-coded “mpirun” invocation
  - Needs to be done for each supported LRMS

YAIM

- **First version of org.glite.yaim.mpi committed to CVS**
  - Built against “modular” YAIM (v. 4.0.0)
- **Module has dual aims:**
  - Configure Grid for cluster where MPI is already configured
    - Sysadmin tells YAIM details of installed MPIs
    - YAIM sets up Grid env. variables (WN) and GLUE (CE)
  - Add baseline MPI functionality in non-MPI cluster
    - Sysadmin just sets ENABLE_MPI
    - Install standard MPIs (mpich, mpich2, openmpi, mpiexec)
    - Set up Grid env. variables (WN) and GLUE (CE)
- **Ready for testing! (ask me for the RPM)**

YAIM meta-RPM

- **For installation of baseline MPI setup on WNs**
  - mpi-start
  - mpich
  - mpich2
  - openmpi
  - mpiexec (OSC)
  - …
- **Will hopefully be integrated into standard gLite release**

Quattor

- **Recommendations for MPI configuration are fully implemented in QWG templates**