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Subject: Re: new tool in PandaRoot: mpiTools

Posted by [Johan Messchendorp](#) on Sun, 21 Dec 2008 11:28:37 GMT

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Hi,

I added a few new features (downwards compatible, though) in mpiTools, namely

- \* more options can be set "on-the-fly" via the job description file, such as timeouts, scratch path, minimum required disk space, maximum allowed threads per worker, etc. With this, one does not need to specify these options on the start-up of the code itself.
- \* it is possible to specify different TIMEOUTS for the time period a job is being killed and the sleep period in case a worker suffers from insufficient disk space or too many thread already running. Before, only one TIMEOUT could be specified.
- \* An option "NICE <lvl>" can be specified in the job description file, which sets the priority level of the following JOBS, e.g. the following jobs will run with a nice level of <lvl> on the worker nodes. Note that -20 is the highest priority and +20, the lowest. Negative nice levels can only be set by the root user.
- \* An option "MAXLOAD <lvl>" can be specified in the job description file, which defines the maximum load of a worker node. Exceeding this number will put the worker to sleep specified in TIMEOUTS.
- \* Added a wrapper script "runmpi" for an MPI session, which is in particularly interesting for heterogeneous systems
- \* Several optimizations, better error and log handling
- \* Inclusion of CPU time in log output
- \* PBS script modified to support MPI2

The wiki site <http://panda-wiki.gsi.de/cgi-bin/view/Computing/PandaRootTools> and the README file have been updated according to the changes. The updates have been carried out in the "trunk" branch of PandaRoot (rev4257 or higher).

Johan.