Contribution ID: **54**   Type: **Poster**

PERFORMANCE ASSESSMENT OF THE 2008 CONFIGURATION OF THE CICC JINR CLUSTER

The CICC JINR cluster has been installed in 2007-2008 years increasing computational power and disk space memory. It is generally used for distributed computing as part of Russian Data Intensive Grid (EGEE-RDIG) to work in LHC Computing Grid (LCG).

With the just installed superblade modules at mid-May 2008, the CICC JINR cluster reached a heterogeneous 560-core structure. The system consists three different homogeneous parts now. Here we discuss an independent assessment of its performance by means of the High Performance LINPACK (HPL) Benchmark and compare it with the results reported for the homogeneous 240-core configuration installed in the first half of 2007. In addition we discuss the superposition of the performances of each homogeneous part.

To define the consistency of the measured computing time dependence on the system dimension entering the HPL benchmark, we implemented a least squares fit procedure the output of which showed that, under the assumption of independent time measurements, the optimal polynomial fitting degree equals three, in agreement with the problem complexity following from the count of the number of involved elementary operations in the LU-decomposition solution of the algebraic system.

A comparison with the reported statistics on the TOP500 data show that the home made free software installation is consistent with the similar works worldwide.

Summary

Romanian authors acknowledge partial support from contract CEX05-D11-67 and A.Ayriyan acknowledges partial support from RFBR grant #08-01-00800-a.

Primary author: Mr AYRIYAN, Alexander (JINR)

Co-authors: Mr LUTSENKO, Alexey (JINR); Dr DUSHANOV, Ermuhammad (JINR); Prof. ADAM, Gheorghe (JINR, Dubna/IFIN-HH, Bucharest); Dr ADAM, Sanda (JINR, Dubna/IFIN-HH, Bucharest); Mr MITSYN, Valery (JINR); Prof. KORENKOV, Vladimir (JINR)

Presenter: Mr AYRIYAN, Alexander (JINR)

Track Classification: 1. Computing Technology