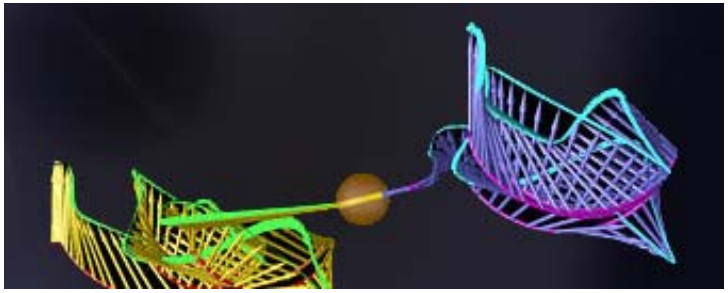

Lattice QCD Computing Project

Responses to Technical Recommendations

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Feedback on the Allocation Process

Recommendation

"While the SPC has explained convincingly how they aim to be fair and inclusive, while maintaining high scientific standards, it would be useful to obtain feedback from the user community on the perceived fairness of the allocation process. This could for instance be done through a questionnaire. Maybe the NERSC user survey can be used as an example."

Response

An online user survey was conducted by the LQCD Computing Project in August/September 2007. The survey solicited user feedback in 23 subject areas, including the scientific proposal and allocation process. Responses were received from 54 users out of an estimated user base of 60 individuals.

- 70% of the respondents felt that the allocation process helps maximize scientific output.
- 98% of the respondents felt that the time allowed for proposal preparation was adequate.
- 83% found the Call for Proposals to be adequately clear (i.e., no additional clarification needed).

Feedback on the Allocation Process (2)

Response (continued):

However, on a scale of 1 to 5, with 1 being very dissatisfied and 5 being very satisfied, the transparency of the allocation process was rated 3.05 (61% satisfaction rating) and the fairness of the allocation process was rated 3.15 (63% satisfaction rating).

The survey results clearly indicate that some improvement is needed to improve the transparency and perceived fairness of the allocation process by the user community.

To address this, Andreas Kronfeld, Chair of the Scientific Program Committee, discussed the results of the survey at the 2008 USQCD All-hands Meeting. He shared with the community the free-form comments that were provided by survey respondents. During his presentation, he described the proposal and allocation process in an attempt to address transparency concerns. Following his presentation, he chaired a round-table discussion and encouraged questions and comments regarding the allocation process.

We plan to conduct a follow-up survey in late-summer 2008 to assess the perception of the community to the 2008 allocation process. In the '08 survey, we will structure questions related to the proposal/allocation process differently, in an attempt to gain more insight into how to better improve transparency and perceived fairness going forward.

Tracking Job Failure Rates

Recommendation:

"If possible, it would also be useful to track job failure rates, and in particular find out which part is due to hardware errors, and which part due to user error. This would help in determining whether instruction and assistance to users are optimal, and whether the SciDAC software is of optimal service to users. It may also help identify users who do not use their allocation efficiently."

Response:

In order to automatically trace job failures in sufficient detail for categorization, software development is necessary. Such software development is out of scope of this project. However, this task has been undertaken by the cluster reliability subproject of the SciDAC II Lattice QCD Computing project. As of late February 2008, detailed automated tracking of most aspects of operation, including scheduler activity, hardware failure information, and process information, was put in place on the Fermilab Pion and Kaon cluster. The subproject continues to work on the software needed to interpret this recorded data and will begin producing reports by the end of FY08. This software will be ported to the JLab clusters in FY09.

QCDOC does not permit the use of exit codes for this purpose, so quantitatively tracking the rate and nature of job failure rates on QCDOC is complicated. To obtain this information would require modifying the OS, which would be time-consuming and costly. Given the cost of this effort and the nature of jobs run on QCDOC, we do not feel that the benefits of an automated job failure tracking system for QCDOC justify the cost, given the small number of users affected.