

CGNS Steering Committee Telecon Minutes
3 September 2014

- 1) The telecon was called to order at 11:00 AM eastern time. There were 10 attendees, listed in Attachment 1.
- 2) The minutes of the 18 February 2014 telecon were not approved yet; this action will be delayed to the next telecon.
- 3) Report on NASA contract with HDF Group to document/improve CGNS parallel performance
 - a) Rumsey introduced Scot Breitenfeld and Quincey Koziol of the HDF Group.
 - b) Scot gave an overview of his work to date, which included a before and after plot of CGNS parallel performance on an IBM machine (Attachment 2). The “before” shows major slowdown with `cgp_open` for many processors (it was basically unusable for more than 1024 processors).
 - c) The `cgp_open` time still increases somewhat with more processors, but it is now very reasonable and comparable with other methods. Scot is still doing some work to optimize, and also is going to work on the Lustre systems at NAS.
 - d) It was noted that CGNS does not do domain composition for you. It assumes the user has some other method for that (e.g., ParMetis).
 - e) Chunking and compressing within HDF5 was brought up, but the current task does not include looking at that aspect with respect to serial usage.
 - f) This is all currently available in a branch of the SVN repository on SourceForge. Scot plans to do more documentation, then email to CGNSTalk to get others to try it out.
 - g) The HDF Group expressed an interest in continuing to collaborate with CGNS in the future. They see it as a win-win.
 - i) Perhaps (with funding) HDF Group could have an expert on-hand to help to keep the software up-to-date and possibly include help desk support, training, courses, etc.
 - ii) A consortium model was mentioned (e.g., possibly individual CGNS steering members contributing monetarily a small amount each year).
 - iii) Rumsey mentioned that over the last 15 years, all funding for CGNS has come from NASA, and it has been irregular (every 2-3 years or so). So any sort of funding for CGNS continues to be a challenge. Possibly grants (like NSF that we considered earlier this year) can be gone after in the future, with collaboration between CGNS and HDF Groups.
- 4) Discussion of CGNS Leadership
 - a) Thomas Hauser is stepping down as chair of the CGNS Steering committee, after having served more than three full terms. He can no longer dedicate the time to it. The committee thanks Thomas very much for his strong dedication to the team over so many years!

- b) The committee talked about various new options, including (1) getting a new volunteer to serve as chair, (2) rotating the chair position among current members, and (3) going without a chair. Most seemed to feel that some sort of leader was necessary, but we already know that finding such a volunteer is nearly impossible. A new idea of Co-chairs was floated. Subsequent to the Telecon, Rumsey, Bush, and Wang agreed to serve as co-chairs, sharing the leadership responsibilities. An email vote will be taken to make the leadership proposal of Bush-Rumsey-Wang triumvirate official.
- 5) Other issues
- a) Rumsey mentioned that his drive to update the latest SIDS as an AIAA Recommended practice has been canceled (at least for now). The process has become too difficult, and the person at AIAA who was working on it is no longer there. There also does not seem to be a strong need for this, as most people come to CGNS through our website, and not through AIAA recommended practice documents.
 - b) Rumsey suggested that we remove most of the long-standing action items, keeping only essential ones, such as those involving CPEX activity (see below).
- 6) Status of Old Action Items:
- a) Hauser and Duque to continue to look into the consortium idea for CGNS, including more active support of HDF-5 consortium. Also look into applying to NSF software infrastructure for sustained innovation by Feb 2014, possibly related to data management plan.
 - i) Cancelled.
 - b) Hauser, Duque, and Iannetti to continue to develop Iannetti's proposal for handling sprays of unconnected points.
 - i) Cancelled.
 - c) Hauser to finalize the CGNS survey based on feedback from committee members, and email out to CGNSTalk.
 - i) Cancelled.
 - d) Guzik will summarize the changes required to the MLL software to have core data always start at location (1,1,1) when including Rind data, as well as backward-compatibility implications, to help the Steering Committee decide on a course of action (index discrepancy).
 - i) This was done earlier in the year, and made into a new CPEX 0040, which still needs steering committee approval.
 - e) Hauser will look into the parallel I/O performance issues.
 - i) Cancelled.
 - f) All: how to handle bug fixes and CGNS extensions in the future?
 - i) Cancelled.
 - g) Hauser to draft outline of NSF proposal and solicit input from committee.
 - i) Cancelled.
 - h) Rumsey to list CPEX 0038 as accepted on website.
 - i) Done.
 - i) Rumsey to add CPEX 0038 to documentation.

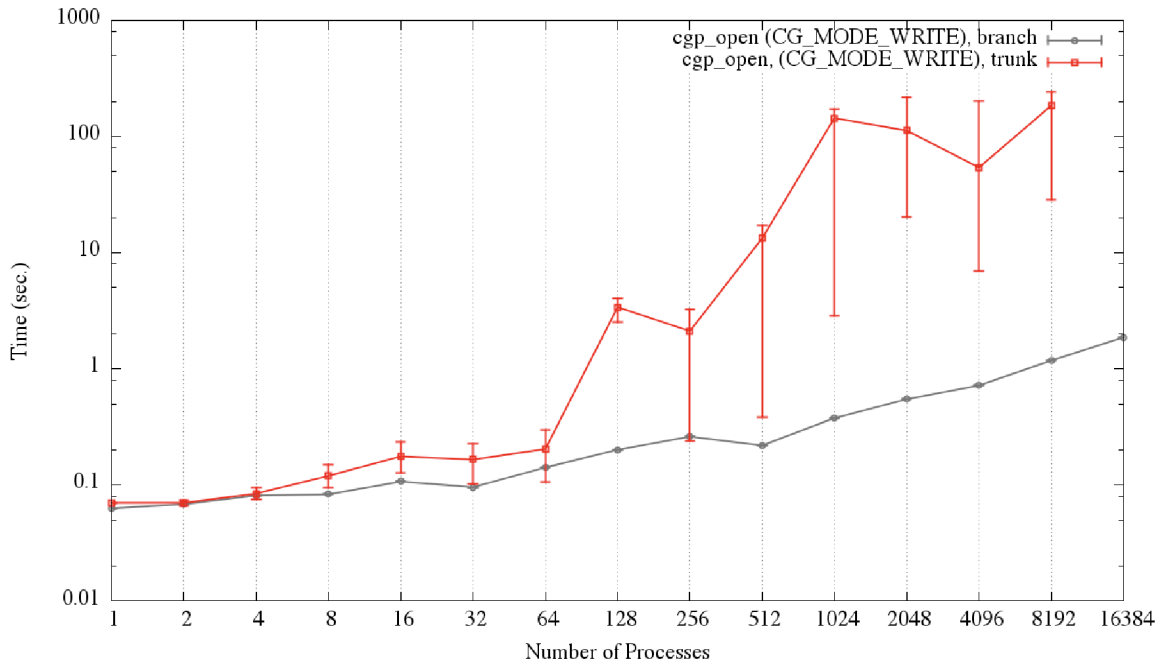
- i) Done in docs by Rumsey, but still need to add CPEX 0038 to MLL.
 - j) Committee to review and vote on CPEX 0039 on inter-base referencing will come after March 3.
 - i) Carries.
 - k) Hauser to contact HDF group and vendor members of the CGNS Steering Committee to gauge their interest in collaborating on NSF proposal.
 - i) Cancelled.
- 7) Next Telecon date has not been set yet. A confirmation email will be sent prior to the meeting.
- 8) Summary of **action items**:
- a) CPEX 0038 (already approved and in docs) needs to be added to MLL.
 - b) CPEX 0039 on inter-base referencing needs approval.
 - c) CPEX 0040 on Rind Plane Indexing needs approval.
 - d) Take email vote to make the new CGNS leadership proposal of Bush-Rumsey-Wang triumvirate official.

Attachment 1: Attendees

Pat Baker	Pointwise
Stephen Guzik	Colorado State
Quincey Koziol	HDF Group
Thomas Hauser	University of Colorado
Dmitri Kamenetskiy	Boeing
Kaveh Mohamed	GE Global Research
Marc Poinot	ONERA
Chris Rumsey	NASA Langley
Scot Breitenfeld	HDF Group
ZJ Wang	University of Kansas

Attachment 2

CGNS Parallel Performance Before:



CGNS Parallel Performance After:

