2019-11-12 Meeting notes

Date

12 Nov 2019

Participants

- Scot Breitenfeld
- Koen Hillewaert
- Gregory Sjaardema
- Robert Bush
- Pierre-Jacques Legay
- Tony Garratt
- Vangelis Skaperdas
- Dmitry Kamenetskey
- Marc Poinot
- Earl P Duque
- ZJ Wang

Steering Committee Issues

- Vangelis Skaperdas – *BETA CAE Systems*
  - BETA CAE was voted onto the steering committee

- [x] Christopher Rumsey or Scot Breitenfeld will update the web page.
- [ ] Scot Breitenfeld will follow-up with Robert Bush to see if P&W has a new representative for the committee or to drop P&W.

Thank you to Bob Bush (Pratt & Whitney) for his years of service to CGNS.

Discussion topics

Time (Approximate)	Item	Presenter	Notes
1min	Approve 03 Sep 2019 minutes.	Scot Breitenfeld	Passed
5min	CGNS version number specification	Scot Breitenfeld Vangelis Skaperdas	- [ ] Beta-cae will summarize the issue and the proposed solution to the version issue - [ ] Koen Hillewaert will send out the Beta-cae document to the entire committee for disc version to 4.0, or to continue with the 3.x series and to just provide a graceful exit fix. discussion. - [ ] Koen Hillewaert at the next meeting will propose removing the promise of forward c
	Removal of cgio_read_data, cgio_read_all_data, cgio_read_block APIs, or restrict to ADF format only.	Scot Breitenfeld	- [ ] Committee voted to remove the APIs, Scot Breitenfeld will remove the APIs in the n which should be used in their place.
15min	prioritization, review and attribution of JIRA bugs/issues	Tony Garratt David Gutzwiller	

Current platform testing matrix

Platform
SunOS 5.11 32-bit
SunOS 5.11 64-bit
Windows 7
Windows 7 x64
Windows 7 Cygwin
Windows 8
Windows 8 x64
Windows 10
Windows 10 x64
Windows 10 Cygwin
Mac OS X Mountain Lion 10.8.5 64-bit
Mac OS X Mavericks 10.9.5 64-bit
Mac OS X Yosemeti 10.10.5 64-bit
AIX 6.1 32- and 64-bit
CentOS 6.7 Linux 2.6.32 x86_64 GNU
CentOS 6.7 Linux 2.6.32 x86_64 Intel
CentOS 6.7 Linux 2.6.32 x86_64 PGI
CentOS 7.1 Linux 3.10.0 x86_64 GNU
CentOS 7.1 Linux 3.10.0 x86_64 Intel
Linux 2.6.32-431.11.2.el6.ppc64

[1] Parallel

Platform support questions and proposals

Drop SunOS - do we know any users using this platform?

Drop Windows 7 and 8

Why are we still testing AIX - do we have any known users on this platform?

Windows is under-tested - Proposal-> Test C and Fortran serial and parallel on Windows 1(

Do we test both 32bit (legacy) and 64bit API? It's a minor point, but it would a good idea to

Bug list: **CGNS-176** - Openmpi issues for large meshes fails TO DO

A priority of bugs to fix in next release

#1 **CGNS-135** - Windows fails VS17, large files > 2GB TO DO

Crucial to Ansys. Although most HPC is Linux, project set-up often was done on Windows most runs performed on Linux clusters

#2 **CGNS-141** - cg_open fails after calling cgp_open in serial TO DO

#3 **CGNS-116** - Parallel CGNS causes invalid free with MPI Window object TO DO

- important to have parallel working

#4 CGNS-166 - Keep CGNS file compatible with HDF5-1.8
TO DO

#5

CGNS-55 - Add new fortran and C examples to CMake
TO DO

#6

CGNS-55 - Add new fortran and C examples to CMake
TO DO

CGNS-38 - 64bit support should be determined from configure
TO DO

CGNS-162 - Remove the use of configure.bat
TO DO

CGNS-113 - configure --help duplicate/wrong message
TO DO

CGNS-147 - src/configure issues with tcl, tk, and mpi
IN PROGRESS

Conflicting bugs - are we supporting configure or not? Very confusing to end-users

Overall comments from Ansys

Configure much easier to use than cmake. Ansys would prefer we drop cmake and move ba

Make LFS the default - 2Gb is tiny by today's standards. Any reasons not to make LFS the
option for backward compatibility

Tony Garratt will add the LFS option as a Jira issue.

Add large file test cases >4Gb serial and parallel *both platforms*

Overall needs of Ansys - these items and bug fixes important to use, not any of the new enl

Overall comments from NUMECA

I generally agree with the comments from ANSYS / Tony Garrett. I will second a few points

Highest priority bugs:

CGNS-109 - Too many communicators
IN PROGRESS

CGNS-141 - cg_open fails after calling cgp_open in serial
TO DO

CGNS-176 - Openmpi issues for large meshes fails
TO DO

We have disabled parallel CGNS in our release packages until CGNS 176 and CGNS 109 a

I agree with the comments on configure vs CMAKE. Our internal library maintenance syster
possible.

David Gutzwiller Tony Garratt will update the issues mentioned to be scheduled for

- There is no current plan to drop Autotools support.

5min	high-level editing tools for the documentation page	Marc Poinot Christopher Rumsey	Raw html is not an ideal format to maintain documentation, the latex version seemed easier is now out of date compared to the html version. Some committee members were uncertain other documentation methods (Markdown, Readthedocs, etc…). Either way, it will involve s ☐ Marc Poinot will look into latex state of documentation and will look into alternatives
5min	cgnstalk: maintain or to be replaced by an alternative discussion group	Scot Breitenfeld	No discussion
2min	Status of Accepted CPEX 0040 **CGNS-87** - CPEX 40 Rind Plane Indexing **DONE**		No discussion
5min	Status of Accepted CPEX 0041 **CGNS-121** - CPEX 0041 issues wth MIXED/NFACES **DONE**		No discussion
5min	Status of Accepted CPEX 0042 **CGNS-149** - CPEX#42: Storing the Bounding Box of a grid **DONE**		No discussion
5min	Status of Accepted CPEX 0043 **CGNS-180** - CPEX 0043: Family Hierarchy as a Tree **DONE**		No discussion
2min	Status of Future CPEX 0044 **CGNS-182** - CPEX 0045: Polynomial Data and Curved Grid Elements **IN PROGRESS**		No discussion
2min	Status of Accepted CPEX 0045 **CGNS-182** - CPEX 0045: Polynomial Data and Curved Grid Elements **IN PROGRESS**		No discussion
2min	Status of Future CPEX 0046 **CGNS-183** - CPEX 0046: Particle Data **TO DO**	Thomas Hauser	No discussion

Action items from last meetings

- [x] Tony Garratt David Gutzwiller Scot Breitenfeld continue to review outstanding and prioritization of JIRA items/tasks
- [ ] stephen.guzik@colostate.edu documentation of **CGNS-87** - CPEX 40 Rind Plane Indexing **DONE**
- [x] Scot Breitenfeld add Gutzwilers large unstructured multi-block regression test suite and reproduce issues
- [ ] Koen Hillewaert Marc Poinot ZJ Wang Karman – a decision on CAD classification
- [ ] Scot Breitenfeld Update documentation for intel compilers
- [ ] Thomas Hauser organization of off-line meetings for addressing review of **CGNS-183** - CPEX 0046: Particle Data **TO DO**
- [ ] Koen Hillewaert ZJ Wang Matthias Möller organization of off-line meetings for finalizing **CGNS-181** - CPEX 0044: Encoding sets of functions in generic variables **TO DO**
- [ ]

Decisions

- BETA-CAE was added to the steering committee
- The cgio_read* will be dropped in the next release of the CGNS library.

New Business

The HDF Group will be attending Supercomputing '19 and on Tuesday, November 19, at 5:15 p.m, where they will host a BOF session, *HDF5 and its role in Exascale, Cloud, and Object Stores 1*. CGNS parallel improvements will be discussed in the talk.

Schedule next meeting

21 Jan 2020 at 10:00am EST is the next meeting.

Adjourn