

2022-10-11 Meeting notes

Date

Oct 11, 2022 , 10:00 AM EST (US)

Participants

- @Scot Breitenfeld ★
- @Vicky Moschou
- Scott Imlay
- @David Gutzwiller
- @Simone Crippa
- @Tobias Leicht
- @Gregory Sjaardema
- @David Gutzwiller
- @Stephen Guzik
- @dmitry.s.kamenetskiy
- @Tony Garratt ★
- @Patrick Baker (Has new represtive)
- @Earl P Duque
- @ZJ Wang ★
- @Christopher Rumsey ★
- @Matthias Möller ★
- @Pierre-Jacques Legay ★
- Kamenetskiy, Dmitry S
- @Mickael PHILIT
- @Marc Poinot
- @Koen Hillewaert
- Giorgos Strofylas (BETA CAE) ★
- David Garlisch★

★ In attendance

Steering Committee Issues

Note: Numeca (now Cadence) is looking for a new representative. Introduce David Garlisch.

Discussion topics

Item	Presenter	Notes
Approve 2021/7/19 minutes.	@Scot Breitenfeld	<input checked="" type="checkbox"/> post the last meeting's minutes to the CGNS webpage.

<p>high-level editing tools for the documentation page</p>	<p>@Marc Poinot @Christopher Rumsey</p>	<p>Help needed to divide the remaining tasks:</p> <p>🔗 Documentation Migration JIRA Task CGNS-235 · CGNS/cgns.github.io</p> <p>The documentation goes into the source using Doxygen. This work uses the “Doxygen” branch. Examples are given for <code>cg_open</code> and <code>cg_version</code>. The aliases used for repeated variable descriptions are in <code>src/Doxygen/Doxygen.config</code>. We need volunteers to help with translating the remaining APIs to Doxygen.</p> <ul style="list-style-type: none"> • A link to the new website is provided on the main cgns web page: 📄 The official CGNS home page — CGNS Official Web Site • All the MLL APIs have Doxygen entries, the cgio APIs need to be done next. • An automatic generation of the website through GitHub action is done. <p>Still in progress.</p>																				
<p>Converting CGNSTalk archive to Github Discussion Posts</p>	<p>@Scot Breitenfeld</p>	<p>Hope to be completed by next meeting.</p>																				
<p>New features being introduced</p>	<p>@Scot Breitenfeld</p>	<p>subfiling, and multidataset updates.</p> <div data-bbox="568 556 1404 1071"> <p style="text-align: center;">CGNS Benchmark_hdf5, Summit (Four Runs Per Process Size)</p> <table border="1"> <caption>CGNS Benchmark_hdf5 Performance Data (Estimated)</caption> <thead> <tr> <th>Number of Ranks</th> <th>HDF5 -- NATIVE (independent) [MB/s]</th> <th>HDF5 -- NATIVE (collective) [MB/s]</th> <th>HDF5 -- SUBFILING [MB/s]</th> </tr> </thead> <tbody> <tr> <td>2688</td> <td>~45</td> <td>~55</td> <td>~5</td> </tr> <tr> <td>5376</td> <td>~80</td> <td>~110</td> <td>~5</td> </tr> <tr> <td>10752</td> <td>~135</td> <td>~195</td> <td>~5</td> </tr> <tr> <td>21504</td> <td>~200</td> <td>~360</td> <td>~10</td> </tr> </tbody> </table> </div>	Number of Ranks	HDF5 -- NATIVE (independent) [MB/s]	HDF5 -- NATIVE (collective) [MB/s]	HDF5 -- SUBFILING [MB/s]	2688	~45	~55	~5	5376	~80	~110	~5	10752	~135	~195	~5	21504	~200	~360	~10
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<p>Github Issues</p>	<p>@Scot Breitenfeld</p>	<p>Discussion moving from Jira to GitHub issues to track code issues.</p> <p>👍 Approved to move from Jira to GitHub issues.</p>																				
<p>Discussion Topic</p>	<p>@ZJ Wang</p>	<p>Short discussion on past AMR CPEX (0008) and whether AMR should be revisited as a feature supported CGNS. Some groups may be already using CGNS with AMR, but not known for certain. The need for AMR support in CGNS is unknown.</p> <p>@Vicky Moschou @Tobias Leicht @ZJ Wang to discuss progressing CPEX 0008.</p> <p>No new updates.</p>																				
<p>Status update on Accepted CPEX #0045</p> <p>📌 CGNS-182: CPEX 0045: Polynomial Data and Curved Grid Elements</p> <p>IN PROGRESS</p>	<p>@Koen Hillewaert</p>	<p>The branch CPEX45_high_order has not been updated since Feb 25, 2020. An update from @Koen Hillewaert on the status is needed.</p> <p>@Scot Breitenfeld will get an update on the status.</p>																				
<p>Discussion Topic</p>	<p>@Mickael PHILIT</p>	<p>Proposal to have Monitoring numerical probes description to the standard. Some groups may already use CGNS to do that, but there is a need to have a shared approach.</p> <p>✅ Committee needs to review the proposal and provide feedback. @Scot Breitenfeld to send out a reminder.</p> <p>📌 CGNS-272: Add support for Monitoring probes in CGNS TO DO</p> <p>No new updates.</p>																				
<p>Status update on Accepted CPEX #0047</p> <p>Proposed Data integration Points</p>	<p>@Mickael PHILIT</p>	<p>Working on the new website before creating a new development branch to prevent duplicating efforts.</p> <p>Started prototyping with python and C and will push a branch on GitHub in the upcoming weeks. (The “C” branch is a slow work in progress)</p> <p>No new updates.</p>																				

<p>prioritization, review and attribution of JIRA bugs/issues</p>	<p>@Tony Garratt @David Gutzwiller</p>	<p>Next release 4.4.0, Kanban: CGNS General Kanban Board: https://cgnsorg.atlassian.net/secure/RapidBoard.jspa?rapidView=3&projectKey=CGNS&selectedIssue=CGNS-190 ISSUE CARRIED OVER: Platform proposals Windows is under-tested. Suggest Test C and Fortran serial and parallel on Windows 10 x64 as a bare minimum Do we test both 32bit (legacy) and 64bit API? It's a minor point, but it would be a good idea to add 32bit to at least one Linux and Windows NEW (June 2021). We need to add Intel OneAPI compilers to the list of supported compilers (note: OneAPI C/C++ compiler is very different to existing legacy one) Bug list: CGNS-176: Openmpi issues for large meshes fails IN PROGRESS 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 and import/export/sharing of mesh/solution done on Windows, while most runs performed on Linux clusters <ul style="list-style-type: none"> 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-38: 64bit support should be determined from configure TO DO CGNS-162: Remove the use of configure.bat TO DO @Scot Breitenfeld is working on updating the Multi-dataset APIs in CGNS to use the new array-based API and is testing CGNS with the new HDF5 subfilig feature.</p>
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A reminder that new CPEXs will have to address backward/forward compatibility before being voted on.

Action items from last meetings

Description	Due date ▾	Assignee	Task appears on
<input type="checkbox"/> @Scot Breitenfeld to update the web page.		Scot Breitenfeld	2022-3-29 Meeting notes
<input type="checkbox"/> @Scot Breitenfeld will follow-up with @Koen Hillewaert to find out the status.		Scot Breitenfeld	2022-3-29 Meeting notes
<input type="checkbox"/> @Scot Breitenfeld will email committee an update, and @Tobias Leicht may take over the discussion if needed.		Scot Breitenfeld	2022-3-29 Meeting notes
<input type="checkbox"/> Committee needs to review the proposal and provide feedback. @Scot Breitenfeld to send out a reminder.		Scot Breitenfeld	2022-3-29 Meeting notes
<input type="checkbox"/> @Scot Breitenfeld will enter a Jira issue to make the examples provided by CGNS to be updated to reflect the best practices (in terms of CGNS format description usage).		Scot Breitenfeld	2021-3-2 Meeting notes
<input type="checkbox"/> @Scot Breitenfeld will enter a Jira issue to add to cgnscheck to not only validated the format, but also give a best practices analysis of the chosen CGNS format description and to suggest an alternative format if needed.		Scot Breitenfeld	2021-3-2 Meeting notes
<input type="checkbox"/> @Scot Breitenfeld will enter a Jira issue to add to cgnsconvert the option to take the best practices suggestion from cgnscheck and convert the CGNS format description to that suggestion.		Scot Breitenfeld	2021-3-2 Meeting notes

Description	Due date ▾	Assignee	Task appears on
<input type="checkbox"/> @Mickael PHILIT will create a Jira issue for remaining documentation tasks which need to be completed before switching to the new documentation so we can enlist others and to coordinate the effort.		Mickael PHILIT	2021-3-2 Meeting notes
<input type="checkbox"/> @Mickael PHILIT and higher-order developers (@Tobias Leicht @Koen Hillewaert) will meet to discussion the remaining issue between the CPEX0047 and higher-order methods.		Mickael PHILIT	2021-3-2 Meeting notes
<input type="checkbox"/> SIDS structure is complete in the documentation prototype but the translation process is quite slow. Help requested.			2021-3-2 Meeting notes
<input type="checkbox"/> @Scot Breitenfeld or @Christopher Rumsey should investigate if the cgns archive can be translated to forum posts or made available on cgns.org , which would make it viewable to web search engines.		Scot Breitenfeld	2021-3-2 Meeting notes
<input type="checkbox"/> @Scot Breitenfeld will update the copyright information on the webpage.		Scot Breitenfeld	2021-3-2 Meeting notes
<input type="checkbox"/> @Scot Breitenfeld Update documentation for intel compilers (KH)		Scot Breitenfeld	2021-3-2 Meeting notes
<input type="checkbox"/> @Thomas Hauser will organize a meeting before the next committee meeting; probably even this week.		Thomas Hauser	2021-3-2 Meeting notes
<input type="checkbox"/> Suggest looking into using Doxygen, @Marc Poinot suggest a separate meeting to discuss.		Marc Poinot	2021-3-2 Meeting notes
<input type="checkbox"/> @Scot Breitenfeld or @Christopher Rumsey should investigate if the cgns archive can be translated to forum posts or made available on cgns.org , which would make it viewable to web search engines.		Scot Breitenfeld	2020-12-8 Meeting notes
<input type="checkbox"/> @Scot Breitenfeld will update the copyright information on the webpage.		Scot Breitenfeld	2020-12-8 Meeting notes
<input type="checkbox"/> @Scot Breitenfeld will identify reviewers for the CPEX who will report before the next meeting, the CPEX is scheduled to be voted on at the next meeting. This effort should be coordinated with higher-order effort.		Scot Breitenfeld	2020-12-8 Meeting notes
<input type="checkbox"/> Change test site to: https://poinot.github.io/cgns-test.github.io/			2020-12-8 Meeting notes
<input type="checkbox"/> Tabling issue, we will look into alternatives if need arises.			2020-12-8 Meeting notes

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Decisions

Page Title	Decisions
2019-11-12 Meeting notes	<ul style="list-style-type: none"> BETA-CAE was added to the steering committee The <code>cgio_read*</code> will be dropped in the next release of the CGNS library.

<p>2020-12-8 Meeting notes</p>	<p>Meeting notes Approved.</p> <p>Passed: move to Github discussions when it's out of beta and retire the use of lists.nasa.gov. The notice should be posted to cgnstalk before the transition to discussions.</p> <p>Passed: Release all cgns.org documentation into the public domain.</p>
<p>2021-3-2 Meeting notes</p>	<p>Passed: move to Github discussions when it's out of beta and retire the use of lists.nasa.gov. The notice should be posted to cgnstalk before the transition to discussions.</p> <p>Passed: Release all cgns.org documentation into the public domain.</p>
<p>2021-6-15 Meeting notes</p>	<p>Passed CPEX #0047</p>
<p>2021-9-7 Meeting notes</p>	<p>Approved to include in the CGNS's example code.</p>
<p>2022-10-11 Meeting notes</p>	<p>Approved to move from Jira to GitHub issues.</p>
<p>2022-3-29 Meeting notes</p>	<p>Removal of CU-Boulder from Steering Committee (Thomas Hauser is now at NCAR). Passed</p>

New Business

Any new CGNS funding proposal opportunities? Nothing was identified at the meeting.

NO UPDATES

Schedule next meeting

Jan 10, 2023 , 10:00 AM EST (US)

Adjourn