

GROMACS - Task #2122

Stop using where()

02/15/2017 01:15 AM - Mark Abraham

Status:	Closed
Priority:	Low
Assignee:	Mark Abraham
Category:	core library
Target version:	2019
Difficulty:	simple
Description	
This debugging aid causes several of branches per MD step, and dozens of them on global-communication steps. Even if they were implemented in a no-cost way, we should be using debuggers, not printf.	

Associated revisions

Revision c70211cf - 02/17/2017 03:51 PM - Mark Abraham

Use gmx::Mutex and gmx::lock_guard to fix some issues

Refactored a few uses of raw thread-MPI mutexes to fix known leaks, so valgrind and LeakSanitizer become more useful.

Discovered that the thread-MPI trylock behaviour has always been buggy on Windows, and cannot be fixed so that the return code is consistent across the two current implementations in the case where the calling thread might already own the lock. Fortunately, we don't use trylocks anywhere, and the problematic case is unlikely to occur, but the limitation is now documented.

Added unit tests for whichever mutex implementation we are using, now and in the future. These cover the above case.

Found bugs in _where, which presumably wasn't an issue if it only ran when handling errors. But it runs multiple times per MD step.

Refs #2122

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Change-Id: If1b2f092c569f47d67ce39e6decb56f04cea314a

Revision c8c0605d - 04/12/2018 05:57 PM - Mark Abraham

Remove use of where(), if DEBUG etc.

The where() debugging function causes run-time branches in release-mode builds, and replaces functionality for which one should use a debugger.

Other such preprocessing clutter should also go away. Since we don't check whether any of it compiles or produces useful data, we may as well delete it.

This coincidentally simplifies the call signatures of some functionality, too.

Retained some useful essentialdynamics debug code, which is now always compiled, and written from setup code only at debug level 2.

Refs #2423

Fixes #2122

Change-Id: I2c60c162734f4c2ec1d56153853a36d28e6a66ff

History

#1 - 02/15/2017 01:17 AM - Mark Abraham

Similarly, dump_it_all should go, though at least that one only runs in debug build.

#2 - 02/15/2017 02:28 AM - Gerrit Code Review Bot

Gerrit received a related patchset '1' for Issue [#2122](#).
Uploader: Mark Abraham (mark.j.abraham@gmail.com)
Change-Id: gromacs~master~lf1b2f092c569f47d67ce39e6decb56f04cea314a
Gerrit URL: <https://gerrit.gromacs.org/6474>

#3 - 06/27/2017 11:18 PM - Mark Abraham

- Target version changed from 2018 to 2019

#4 - 12/11/2017 12:18 PM - Erik Lindahl

- Tracker changed from Bug to Task
- Priority changed from Normal to Low
- Affected version - extra info deleted (all of them)
- Affected version deleted (git master)

#5 - 04/05/2018 11:04 PM - Gerrit Code Review Bot

Gerrit received a related patchset '1' for Issue [#2122](#).
Uploader: Mark Abraham (mark.j.abraham@gmail.com)
Change-Id: gromacs~master~l2c60c162734f4c2ec1d56153853a36d28e6a66ff
Gerrit URL: <https://gerrit.gromacs.org/7746>

#6 - 04/05/2018 11:06 PM - Mark Abraham

- Status changed from New to Fix uploaded

#7 - 04/12/2018 06:00 PM - Mark Abraham

- Status changed from Fix uploaded to Resolved

Applied in changeset [c8c0605d074b04d5ddf358bbe22e019e267977b4](#).

#8 - 04/13/2018 01:21 PM - Mark Abraham

- Status changed from Resolved to Closed