incorrect runtime assertion catches CUDA API errors from GPU sanity checking

The compatibility/sanity checking implemented in is_gmx_supported_gpu_id() leaves the CUDA runtime status contain the last error when the checks get interrupted by an API error and an "insane" state would be reported. However, the called, findGpus() runtime asserts on the API state which means that it will catch and abort on errors that should not be fatal.

As a result, runs that detect an error during GPU detection will abort instead of skipping the device(s) that can't be used.

Associated revisions
Revision 74400c15 - 02/20/2018 01:20 AM - Szilárd Páll
Avoid aborting mdrun when GPU sanity check detects errors

A release assertion was added which assumed that the GPU compatibility/sanity checks return with a clean CUDA API state. Consequently, any run that encountered a non-success return value from the CUDA API would abort the run instead of continuing the run without using the GPU in question.
This change adds code to handle and issue a note on the error encountered as well as ensures that the CUDA API error state cleared at the return of the GPU detection.

Fixes #2415
Change-Id: I5d7ed59ef8e4052a75b51c9a526b8dcb465ff611

Revision 6a897857 - 08/15/2018 09:43 PM - Szilárd Páll
Improve GPU detection sanity check error message

When the unexpected condition is triggered some extra info on what type of error has been left behind after a successful detection of a compatible GPU is now printed to aid with identifying issues.

Refs #2415
Change-Id: I85e0da4c339df8184aa2dec49440ce2d0e83e8bf

History
#1 - 02/16/2018 07:48 PM - Szilárd Páll
- Status changed from New to In Progress
- Assignee set to Szilárd Páll

#2 - 02/16/2018 07:56 PM - Gerrit Code Review Bot
Gerrit received a related DRAFT patchset '1' for Issue #2415.
Uploader: Szilárd Páll (pall.szilard@gmail.com)
Change-Id: gromacs~master~I5d7ed59ef8e4052a75b51c9a526b8dcb465ff611
Gerrit URL: https://gerrit.gromacs.org/7594

#3 - 02/19/2018 09:51 AM - Gerrit Code Review Bot
Gerrit received a related patchset '1' for Issue #2415.
Jia Hong on gmx-users is observing failure of the assertion added in the previous fix of this issue, in a case where GPU 0 is too old and GPU 1 is new, so something probably needs work.

No matter what I do I could not repro the error and the user report is incomplete, so this needs more info.

Moving this to the next point release then

Paul Bauer wrote:

Szilard, do you agree on closing this then?

Yes.