

## GROMACS - Bug #2450

Task # 2454 (Closed): OpenCL infrastructure improvements

### OpenCL runtime version check missing

03/13/2018 06:48 PM - Szilárd Páll

<b>Status:</b> Closed	
<b>Priority:</b> Normal	
<b>Assignee:</b> Szilárd Páll	
<b>Category:</b> mdrun	
<b>Target version:</b> 2019	
<b>Affected version - extra info:</b>	<b>Difficulty:</b> uncategorized
<b>Affected version:</b> 2018	
<b>Description</b>	
We missing the check of the device and driver OpenCL version capability against the minimum required.	

#### Associated revisions

##### Revision 76336a1c - 12/22/2018 12:08 PM - Szilárd Páll

Runtime check of device OpenCL support

This change adds a runtime check of the OpenCL device version support against the minimum requirement along some minor refactoring.

Fixes #2450

Change-Id: I0622d8f93b97d877d40fbaa65194f0db8442ffd5

#### History

##### #1 - 03/13/2018 07:01 PM - Szilárd Páll

- Description updated

- Assignee set to Szilárd Páll

I think we can reduce the work by not worth fixing it in 2018 because one would be hard-pressed to find a GPU from a vendor that passes the (only) existing check, but is not at least v1.1. However, bumping the requirement to 1.2 means that we will have some older devices not meeting the requirements (e.g. NVIDIA Fermi).

##### #2 - 03/13/2018 08:48 PM - Szilárd Páll

There was a bit of a misunderstanding, `clGetDeviceInfo(... CL_DRIVER_VERSION ...)` returns the version of the OpenCL vendor driver, e.g. for NVIDIA something like 384.98. This is not too useful for checking compatibility, but it would be useful to report in the `mdrun -version` header.

##### #3 - 03/13/2018 09:00 PM - Szilárd Páll

Szilárd Páll wrote:

This is not too useful for checking compatibility, but it would be useful to report in the `mdrun -version` header.

Correction: that would be useful as long as we don't allow different vendor's devices in the same run -- and even then, the error that should prevent this (ATM actually this is missing) comes after the header is printed. Such info might be better in the device detection output next to the name/vendor/etc.

##### #4 - 03/13/2018 10:42 PM - Gerrit Code Review Bot

Gerrit received a related patchset '1' for Issue [#2450](#).

Uploader: Szilárd Páll ([pall.szilard@gmail.com](mailto:pall.szilard@gmail.com))

Change-Id: gromacs~master~I0622d8f93b97d877d40fbaa65194f0db8442ffd5

Gerrit URL: <https://gerrit.gromacs.org/7674>

##### #5 - 03/14/2018 01:27 PM - Mark Abraham

It would be good to have a master "OpenCL infrastructure improvements" redmine task so that people can find related work via the hierarchy.

**#6 - 03/14/2018 08:52 PM - Szilárd Páll**

- Parent task set to #2454

**#7 - 12/17/2018 10:13 PM - Gerrit Code Review Bot**

Gerrit received a related patchset '1' for Issue [#2450](#).

Uploader: Szilárd Páll ([pall.szilard@gmail.com](mailto:pall.szilard@gmail.com))

Change-Id: gromacs~release-2019~l0622d8f93b97d877d40fbaa65194f0db8442ffd5

Gerrit URL: <https://gerrit.gromacs.org/8840>

**#8 - 12/17/2018 10:46 PM - Szilárd Páll**

- Status changed from New to Fix uploaded

**#9 - 12/22/2018 12:15 PM - Szilárd Páll**

- Status changed from Fix uploaded to Resolved

Applied in changeset [76336a1c730ed00b6f4d2cdcab87cfd6e9898e3e](#).

**#10 - 12/22/2018 12:59 PM - Paul Bauer**

- Status changed from Resolved to Closed