GROMACS - Task #2699

Test POWER9

10/15/2018 05:29 PM - Mark Abraham

Status:	New	
Priority:	Normal	
Assignee:		
Category:	core library	
Target version:	2021-infrastructure-stable	
Difficulty:	uncategorized	

Description

Mark and Szilard have access at BSC.

xlc 16.1 still cannot compiler c++11 in its c++11 mode, so I propose we ban that compiler so people don't waste time trying

Subtasks:

Feature # 2748: Power9 build system support	**Closed**
Task # 2772: check performance on POWER9	**Rejected**

History

#1 - 10/28/2018 05:12 AM - Erik Lindahl

I would rather suggest to keep it simple and not add more CMake code for corner cases - we can test for specific features, or simply accept that some broken compilers will result in things crashing.

For cases where there are **silent** bugs we might need specific code to ban compilers, but otherwise I would suggest that we avoid adding a ton of code checking specific compiler versions that we then need to keep testing and modifying every release!

#2 - 10/28/2018 07:25 AM - Mark Abraham

Erik Lindahl wrote:

> I would rather suggest to keep it simple and not add more CMake code for corner cases - we can test for specific features, or simply accept that some broken compilers will result in things crashing.

OK, but you're the one who wants to stop checking in our CMake for c++11 features that don't work :-) e.g. adding

```
class temp
{
  int x[2] = {0, 0};
};
```

in the existing checks for c++11 compatibility of the compiler is likely enough to effectively ban the xlc with which I've noticed a compilation error for that kind of construct. IMO that is what we should do.

> For cases where there are **silent** bugs we might need specific code to ban compilers, but otherwise I would suggest that we avoid adding a ton of code checking specific compiler versions that we then need to keep testing and modifying every release!

Sure, I'd much rather have a feature test than a specific disabling

#3 - 11/08/2018 04:23 PM - Szilárd Páll

- Related to Feature #2748: Power9 build system support added

#4 - 12/31/2018 11:22 AM - Paul Bauer

- Target version changed from 2019 to 2020

retargeted to 2020

#5 - 12/02/2019 01:45 PM - Paul Bauer

- Target version changed from 2020 to 2021-infrastructure-stable

#6 - 12/02/2019 02:49 PM - Mark Abraham

If POWER9 is now a "best effort support" platform that we won't test this year, we should agree to not test it until some new development in POWER space

#7 - 12/03/2019 11:02 PM - Szilárd Páll

This issues seems to be more about xlc rather than Power, so the title seems is slightly misleading.

I've built and ran on Power9 just recently, so it is not exactly untested. We also do have hardware (that now works with a CUDA GPU too), so not harder to do basic sanity check than on most other platforms.
(As a side-note we have users at ORNL (and Livermore too I think) using GROMACS on Summit and Sierra and we've discussed engaging with them to get help with testing -- perhaps it is worth following up on that?)

#8 - 12/04/2019 12:13 AM - Szilárd Páll

2020 beta3 builds and passed tests on our Raptor Talos II Power9 with + an NVIDIA GPU using gcc 8.3 and 9.2 + CUDA 10.1.

#9 - 12/04/2019 03:29 PM - Mark Abraham

xlc is already not supported, so I agree that that earlier conversation is no longer relevant.

After Szilard's report, I guess we regard Power as tested for 2020