

GROMACS - Task #3082

Task # 3370 (New): Further improvements to GPU Buffer Ops and Comms

Feature # 2915 (In Progress): GPU direct communications

move launch/synchronization points to clarify task dependencies

09/09/2019 06:12 PM - Szilárd Páll

Status:	New	
Priority:	High	
Assignee:		
Category:	mdrun	
Target version:	2021	
Difficulty:	uncategorized	
Description		
<p>The direct communication changes introduce new dependencies which are currently satisfied using function calls that lead to position dependent brittle code and as a side-effect suboptimal code essentially eliminating asynchrony.</p> <p>Data dependencies should be reassessed after integration:</p> <ul style="list-style-type: none">• data movement should be initiated as soon as a producer generates data (rather than right before the communication call invocation);• synchronization should be async whenever possible and when synchronous, done as late as possible, close to the consumer of the data rather than bundled with the data transfer function. <p>Concrete cases to consider:</p> <ul style="list-style-type: none">• TODO		
Related issues:		
Related to GROMACS - Feature #2890: GPU Halo Exchange		In Progress

History

#1 - 10/11/2019 05:26 PM - Szilárd Páll

- Related to Feature #2890: GPU Halo Exchange added

#2 - 10/11/2019 05:53 PM - Szilárd Páll

- Priority changed from Normal to High

#3 - 12/27/2019 04:21 PM - Paul Bauer

- Target version changed from 2020 to 2021