

DeviceQuery and bandwidthTest

Exercise 1:

Login to `login2.gbar.dtu.dk` or `login2.hpc.dtu.dk` (our LSF login nodes) followed by `gpushlsf` to get an interactive session on a GPU node.

Run `nvidia-smi` to make sure you have at least one GPU on your node.

Also run `/appl/cuda/8.0/samples/1_Uutilities/deviceQuery/deviceQuery` to see the details of the GPU (you should do this several times this week to become familiar with it).

Run `lscpu` to check the CPU on your node.

Run `/appl/cuda/8.0/samples/1_Uutilities/bandwidthTest/bandwidthTest` to measure the effective bandwidth for transferring data CPU \leftrightarrow GPU and GPU \rightarrow GPU. Use options `--memory=pageable` and `--memory=pinned` to see the difference between having normal vs. pinned memory. Use option `--device=[0,1,2,3,all]` to see the difference between the gpu cards available.