

NvidiaComputingSDK

Nvidia GPU Computing SDK

The Nvidia GPU Computing SDK provides a lot of examples in CUDA C and OpenCL C. They can be used to verify the correct setup of the GPU, to give a starting point for your own application and to give you an idea how to implement certain algorithms on a GPU.

Copy the folder "NVIDIA_GPU_Computing_SDK" from the directory /rwthfs/rz/SW/nvidia somewhere into your home directory (you must copy it to have write privileges for compilation). Before you can start to build the examples, you have to load the CUDA module. Be aware that you should use the CUDA Toolkit version corresponding to the SDK version, e.g.:

```
module load cuda/50
module load cuda/40
```

Then go to NVIDIA_GPU_Computing_SDK and type

```
make CUDA_INSTALL_PATH=$CUDA_ROOT
```

to make all CUDA and OpenCL examples (since our CUDA Toolkit is not located in the default install path). If you want to make only selected examples, you can find the source codes in the SDK folder as well. In either case you will find the executables in [C/OpenCL ->] bin -> linux -> release(/debug...).

If you have problems while linking selected examples, you have to make the corresponding libraries first:

- cutil_x86_64: SDK/C/common/Makefile
- paramgl: SDK/C/common/Makefile_paramgl
- rendercheckgl: SDK/C/common/Makefile_rendercheckgl
- shrutil_x86_64: SDK/shared/Makefile
- oclUtil_x86_64: SDK/OpenCL/common/Makefile

To verify whether everything is setup properly, run the (ocl)deviceQuery example and the (ocl)bandwidthTest example.

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