**Last Updated: Tuesday, 10 March 2020**

**Period search application with CUDA support**

**RELEASE NOTES**

**v102.12.0.2**

Toggle Section

What's improved?

These improvements were released in v102.12.0.2:

* **Added application info**: Added Application name and Version info to **stderr.txt** file.

What's fixed?

These issues were fixed in v102.12.0.2:

* **Hanging on devices with CC 7.5**: Fixed issue with hanging of the whole application on random tasks. There was a misaligned synchronisation of code inside the functions *mrqmin.cu* and *gauss\_errc.cu* that has been executed at threadIdx.x = 0 only which was leading to infinite loop of the calling kernel *CUDACalculateIter1\_mrqmin1\_end().*

**v102.12.0.1**

Toggle Section

What's improved?

These improvements were released in v102.12.0.1:

* **Added support for latest CC**: Application was built with latest CUDA SDK v100.2 adding support for latest NVIDIA devices with Compute Capabilities (CC). This build supports CC 3.0, 3.5, 3.7, 5.0, 5.2, 6.0, 6.1, 7.0, & 7.5 from Kepler, Maxwell, Pascal, Volta & Turing(1) architectures and their GeForce, Quadro, NVS and Tesla series, but does **NOT** supports Tegra and Jetson SoC Series devices (CC 3.2, 5.3, 6.2 & 7.2)(2,3) which are not subject of interest for this project.
* **Max User Registers**: The value of **Max Used Registers** is set to **32**. This way we achieved 100% kernel occupancy for the most time expensive kernels.
* **Message for unsupported CC**: New error message is introduced which now says supported CC limits of the application instead of old “CC2.0 and better supported only”.
* **Added CUDA version**: Added CUDA version info to **stderr.txt** file for the application.
* **Added GPU memory info**: Added GPU memory size and shared memory size info to **stderr.txt** file for current GPU card.

What's fixed?

These issues were fixed in v102.12.0.1:

* **Number of Blocks-per-SM**: Changed the number of Blocks-per-SM for CC 5.x according to the latest CUDA programing documentation.

Notes:

1. [CUDA (Compute Unified Device Architecture) – Wikipedia.](https://en.wikipedia.org/wiki/CUDA#GPUs_supported)
2. [CUDA applications originally developed for dGPUs attached to x86 systems may require modifications to perform efficiently on Tegra® systems.](https://docs.nvidia.com/cuda/cuda-for-tegra-appnote/index.html)
3. [Tegra is a system on a chip (SoC) series developed by Nvidia for mobile devices such as smartphones, personal digital assistants, and mobile Internet devices.](https://en.wikipedia.org/wiki/Tegra)