CUDA Installation file:

GPU Info:

$ lspci | grep -i nvidia

Linux distribution:

$ uname -m && cat /etc/*release

You should see output similar to the following, modified for your particular system:

x86_64

Red Hat Enterprise Linux Workstation release 6.0 (Santiago)

The version of the kernel your system is running can be found by running the following command:

$ uname -r

The kernel headers and development packages for the currently running kernel can be installed with:

$ sudo apt-get install linux-headers-$(uname -r)

Download GPU specific Drivers:

https://developer.nvidia.com/cuda-downloads

For installation, please visit:

https://docs.nvidia.com/cuda/cuda-installation-guide-linux/index.html

Perform the pre-installation actions.

Install repository meta-data

$ sudo dpkg -i cuda-repo-<distro>_<version>_<architecture>.deb

Update the Apt repository cache

$ sudo apt-get update

Install CUDA

$ sudo apt-get install cuda

The PATH variable needs to include /usr/local/cuda-10.2/bin and /usr/local/cuda-10.2/NsightCompute-<tool-version>. <tool-version> refers to the version of Nsight Compute that ships with the CUDA toolkit, e.g. 2019.1.

To add this path to the PATH variable:

$ export PATH=/usr/local/cuda-10.2/bin:/usr/local/cuda-10.2/NsightCompute-2019.1${PATH:+:${PATH}}

In addition, when using the runfile installation method, the LD_LIBRARY_PATH variable needs to contain /usr/local/cuda-10.2/lib64 on a 64-bit system, or /usr/local/cuda-10.2/lib on a 32-bit system

To change the environment variables for 64-bit operating systems:

```
$ export LD_LIBRARY_PATH=/usr/local/cuda-10.2/lib64\
                ${LD_LIBRARY_PATH:+:${LD_LIBRARY_PATH}}
```

To change the environment variables for 32-bit operating systems:

```
$ export LD_LIBRARY_PATH=/usr/local/cuda-10.2/lib\
                ${LD_LIBRARY_PATH:+:${LD_LIBRARY_PATH}}
```

Note that the above paths change when using a custom install path with the runfile installation method.

Test the installation:

To check CUDA compiler

```
$nvcc –version
```

To the GPU device

```
$nvidia-smi
```