Changing the Quadro GPU driver mode

Arxys ships all Quadro GPUs with Windows Display Driver Model (WDDM) driver mode set. Tesla Compute Cluster (TCC) mode disables Windows graphics and is used in headless configurations, whereas WDDM mode is required for Windows graphics. Setting the GPU driver mode to TCC can lead to system instability if a display (monitor) is connected to the GPU.

Some video management software recommend that GPUs used for video processing be configured to TCC mode. Please be advised of the following potential issues and confirm that none will negatively affect your deployment:

- **You cannot have a display connected to an adapter when the underlying device is running in TCC mode.**
- **There is no Vulkan, OpenGL, or Direct3D interop support**
- **Physically connecting a display may cause unpredictable behavior. Windows may detect the TCC adapter as a "Standard VGA" device (which it is not), connected to the existing NVIDIA device.**
- **The unpredictable behavior may result in having to reboot the entire system.**

Using the command line to switch the driver mode to TCC

1. Open powershell using an administrative account
2. Change directory to
   a. "C:\Program Files\NVIDIA Corporation\NVSMI" using command:
      i. **cd "C:\Program Files\NVIDIA Corporation\NVSMI" The double quotes " " are required as there is a space in the directory.**

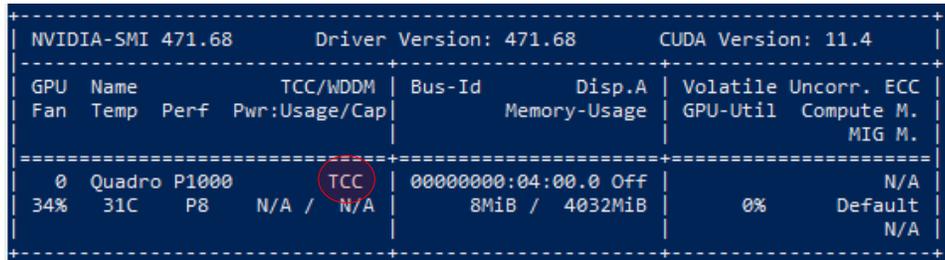   **If that directory does not exist, instead use:**

   b. "C:\Windows\System32" using command:
      i. cd C:\Windows\System32


```
PS C:\Program Files\NVIDIA Corporation\NVSMI> .\nvidia-smi.exe -g 0 -dm 1
Set driver model to TCC for GPU 00000000:04:00.0.
All done.
Reboot required.
```

3. Type **.\nvidia-smi.exe -i 0 -fdm 1** and press enter
4. The system will confirm the drive mode is now TCC.
5. Reboot the system.

## Using the command line to confirm that the driver mode is set to TCC

1. Open powershell using an administrative account
2. Change directory to "C:\Program Files\NVIDIA Corporation\NVSMI" using command:
   cd "C:\Program Files\NVIDIA Corporation\NVSMI" The double quotes " " are required as there is a space in the directory.
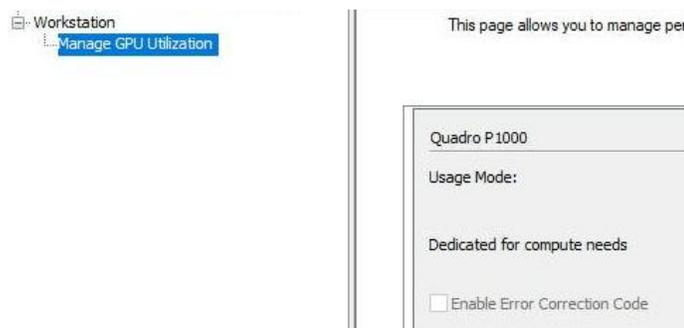

3. Type ".\nvidia-smi.exe" and press enter
4. The current driver mode will be displayed for each GPU

Using the NVIDIA Control Panel to confirm that the driver mode is set to TCC
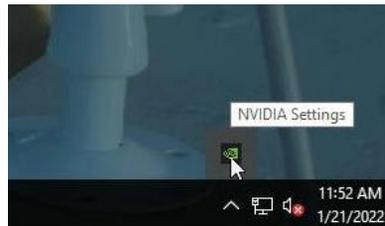
1. Locate the NVIDIA Setting link in the notification section of the taskbar. Double click it to open it.

2. Once the NVIDIA Control Panel opens, click on the "Manage GPU Utilization" option under "Workstation" in the left task menu
3. Look if "Dedicated for compute needs" is displayed, the driver mode is set to TCC.

For additional information or questions please start a support ticket at https://support.arxys.com/