How to monitor Nvidia GPU performance on Linux

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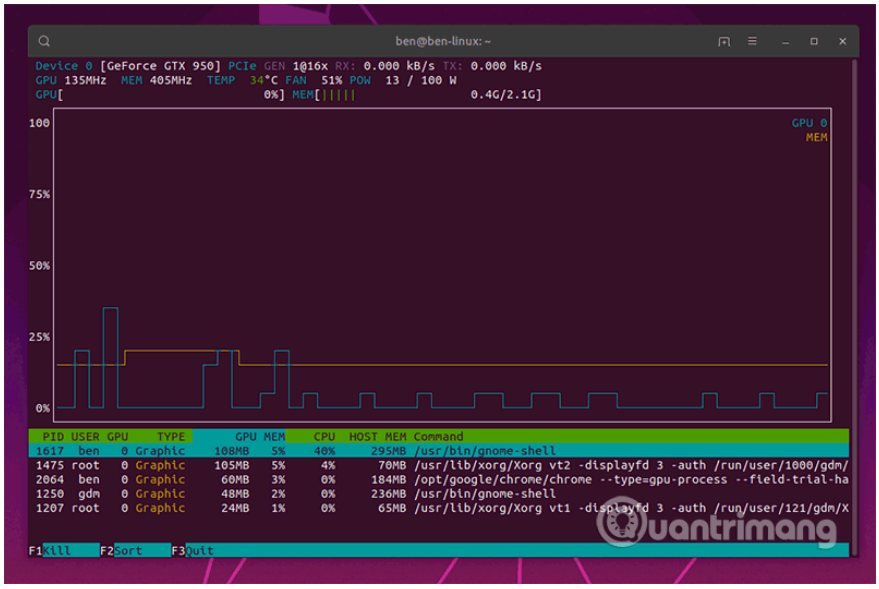
If using Nvidia's GPU, there are two tools to help you monitor the performance of the graphics card on Linux such as NVTOP and Nvidia-SMI.

1. How to install NVIDIA drivers on Kali Linux
2. How to monitor GPU performance in Task Manager of Windows 10
3. Instructions for overclocking graphics cards for better gaming performance

Use NVTOP

If you want to monitor GPU usage in real time, you should try NVTOP. To use this tool, you need to use Nvidia driver for GPU.



Start NVTOP from the terminal to see the current memory usage of the graphics and GPU or for a longer period of time thanks to the intuitive graph. It will update during use with the currently running processes below. This helps you track the process of overheating.

Users can also see the temperature and fan usage, as well as data on current electricity consumption. The latest version of Ubuntu and Debian have NVTOP in its software repositories. You can install by running:

```
sudo apt install nvtop
```

If you run other Linux distributions (or older versions of Ubuntu and Debian), you need to compile and install them manually according to the instructions on the NVTOP Github page. When installation is complete, type the following command in the terminal to run NVTOP:

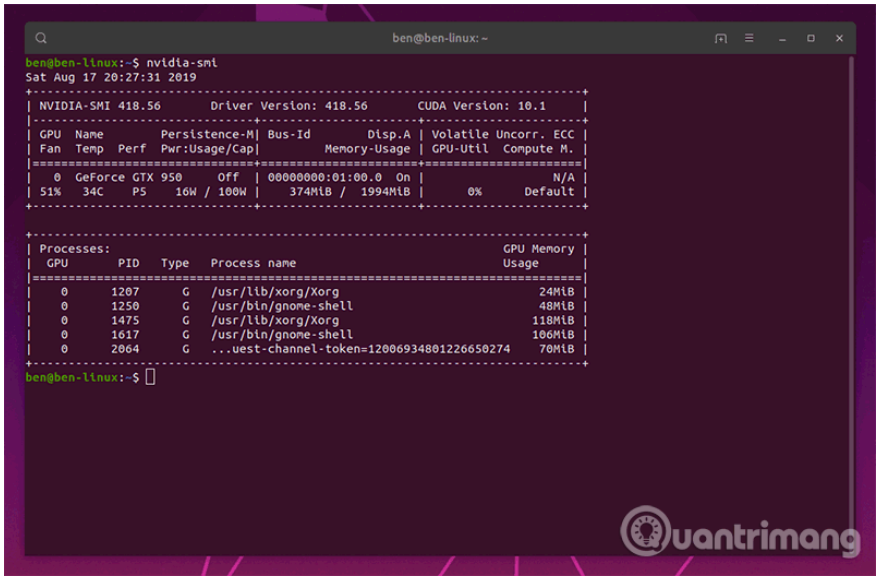
```
Nvtop
```

If you want to see additional command flags to customize the NVTOP before running, use the **nvtop -h** command.

Use Nvidia-SMI

Another option is to use the official Nvidia-SMI software. It is bundled with exclusive drivers provided by Nvidia to Linux users, so you don't need to install anything else to use it.

The tool also provides current information about GPU performance.



You also get as much information as with NVTOP tools such as current energy usage, memory usage and GPU, including the list of running processes.

To run this tool, open the terminal and type:

```
nvidia-smi
```

Information will be listed immediately. The advantage of Nvidia-SMI compared to NVTOP is that it provides clearer information. Nvidia-SMI provides instant images for GPU performance, instead of information running as with NVTOP.

You can run the command several times to update the latest information and save the information from Nvidia-SMI into a file using the following command:

```
nvidia-smi > nvidia-output.txt
```

For a complete list of custom flags, run the command: **nvidia-smi -h** .

NVTOP and Nvidia-SMI are the tools needed to monitor Nvidia GPU performance in Linux. They provide information and images to monitor GPUs. Use Nvidia's Management API as the main tool to ensure information is as accurate as possible.

If the GPU doesn't work properly, you should consider updating it. Refer to the list of the best graphics cards according to the price segment to find the best new graphics card.

I wish you all success!