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## How can I modify xorg.conf file to force X server to run on a specific GPU? (I am using multiple GPUs)

I'm running 2 GPUs and I'm trying to force X server to run on one GPU. According to this website : [http://nvidia.custhelp.com/app/answers/detail/a\\_id/3029/~/using-cuda-and-x](http://nvidia.custhelp.com/app/answers/detail/a_id/3029/~/using-cuda-and-x) , here is how i should proceed :

The X display should be forced onto a single GPU using the BusID parameter in the relevant "Display" section of the xorg.conf file. In addition, any other "Display" sections should be deleted. For example: BusID "PCI:34:0:0"

Here is my xorg.conf file :

```

# nvidia-xconfig: X configuration file generated by nvidia-xconfig
# nvidia-xconfig:  version 304.64  (buildmeister@swio-display-x86-rhel47-12)  Tue Oct 30
12:04:46 PDT 2012

Section "ServerLayout"
    Identifier      "Layout0"
    Screen         0  "Screen0"
    InputDevice    "Keyboard0"  "CoreKeyboard"
    InputDevice    "Mouse0"  "CorePointer"
EndSection

Section "Files"
EndSection

Section "InputDevice"
    # generated from default
    Identifier      "Mouse0"
    Driver          "mouse"
    Option          "Protocol" "auto"
    Option          "Device"  "/dev/psaux"
    Option          "Emulate3Buttons" "no"
    Option          "ZAxisMapping" "4 5"
EndSection

Section "InputDevice"
    # generated from default
    Identifier      "Keyboard0"
    Driver          "kbd"
EndSection

Section "Monitor"
    Identifier      "Monitor0"
    VendorName      "Unknown"
    ModelName       "Unknown"
    HorizSync       28.0 - 33.0
    VertRefresh     43.0 - 72.0
    Option          "DPMS"
EndSection

Section "Device"
    Identifier      "Device0"
    Driver          "nvidia"
    VendorName      "NVIDIA Corporation"
EndSection

Section "Screen"
    Identifier      "Screen0"
    Device          "Device0"
    Monitor         "Monitor0"
    DefaultDepth    24
    SubSection      "Display"
        Depth       24
    EndSubSection
EndSection

```

So I tried to modify the subsection display with the correct BusID but it still does not work, I also tried to put it in the section Device.

Anyone knows how i could do that ?

[cuda](#) [gpu](#) [nvidia](#) [xserver](#)

asked Aug 22 '13 at 13:45



[user2682877](#)  
251 4 11

## 1 Answer

If you have 2 NVIDIA GPUs, get the BusID parameters for both. The doc you linked explains a couple ways to do that, but `nvidia-smi -a` is pretty easy.

You will need to figure out which GPU you want to keep for display, and which you want to keep for CUDA. Again, this should be pretty obvious from `nvidia-smi -a`

Let's suppose your `nvidia-smi -a` includes a section like this:

```
PCI
Bus           : 0x02
Device        : 0x00
Domain        : 0x0000
Device Id     : 0x06D910DE
Bus Id        : 0000:02:00.0
```

Then modify the device section like this:

```
Section "Device"
Identifier    "Device0"
Driver        "nvidia"
VendorName    "NVIDIA Corporation"
BusID         "PCI:2:0:0"
EndSection
```

Then reboot. Make sure the one you are keeping for display is the one with the display cable attached!

You may also be interested in reading the [nvidia driver readme](#) and search on "BusID" for additional tips.

The document you linked references a "Display" section but that should be the "Device" section.

edited Aug 22 '13 at 14:58

answered Aug 22 '13 at 14:04



[Robert Crovella](#)  
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Finally the problem was that the 2nd GPU was defective. It was detected but was unable to display. Your answer was helpful though thank you ! – [user2682877](#) Aug 23 '13 at 9:37

One **very** important note; if there are many GPUs installed you will get hex values from `lspci` or `nvidia-smi` like `0000:0A:00.0`. You have to either convert it to decimal like this `10:00:0` or skip leading zero(s) like this `A:00:0` (notice `0A` is now just `A`). Credit goes to [ossifrage](#) at [#ethereum-mining](#) on Freenode. – [Piotr Dobrogost](#) Jul 13 at 0:46