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INSTALLING NVIDIA DRIVERS ON RHEL OR CENTOS 7

Most users of NVIDIA graphics cards prefer to use the drivers provided by NVIDIA. These more fully support the capabilities of the card when compared to the nouveau driver that is included with the distribution. These are the steps to install the NVIDIA driver and disable the nouveau driver.

Prepare your machine

```
yum -y update
yum -y groupinstall "GNOME Desktop" "Development Tools"
yum -y install kernel-devel
```

Download the latest NVIDIA driver for unix.

==> <http://www.nvidia.com/object/unix.html> ==> Latest Long Lived Branch version

Note: If using a recently released, top end GTX or Tesla you may get more support with the Latest Short Lived Branch instead.

In order to have the NVIDIA drivers rebuilt automatically with future kernel updates you can also install the EPEL repository and the DKMS package. This is optional.

```
yum -y install epel-release
yum -y install dkms
```

Reboot your machine to make sure you are running the newest kernel

Edit `/etc/default/grub`. Append the following to `"GRUB_CMDLINE_LINUX"`

```
rd.driver.blacklist=nouveau nouveau.modeset=0
```

Generate a new grub configuration to include the above changes.

```
grub2-mkconfig -o /boot/grub2/grub.cfg
```

Edit/create `/etc/modprobe.d/blacklist.conf` and append:

```
blacklist nouveau
```

Backup your old initramfs and then build a new one

```
mv /boot/initramfs-$(uname -r).img /boot/initramfs-$(uname -
```



```
r)-nouveau.img
dracut /boot/initramfs-$(uname -r).img $(uname -r)
```

Reboot your machine

If your machine doesn't boot to a login prompt disconnect your monitor from the graphics card and plug directly into the onboard VGA port. Alternatively SSH directly into the machine.

The NVIDIA installer will not run while X is running so switch to text mode:

```
systemctl isolate multi-user.target
```

Run the NVIDIA driver installer and enter yes to all options.

```
sh NVIDIA-Linux-x86_64-*.run
```

Reboot your machine

Optionally install NVIDIA's CUDA Toolkit

Download the latest CUDA Toolkit (runfile installer option, not the rpm download)

```
==> https://developer.nvidia.com/cuda-downloads ==> Linux ==>
x86_64 ==> RHEL/CentOS ==> 7 ==> runfile (local)
```

Run the CUDA installer.

```
sh cuda_*.run
```

Say no to installing the NVIDIA driver. The standalone driver you already installed is typically newer than what is packaged with CUDA. Use the default option for all other choices.

To add CUDA to your environment add the following files.

Create /etc/profile.d/cuda.sh

```
PATH=$PATH:/usr/local/cuda/bin
export PATH
```

Create /etc/profile.d/cuda.csh

```
set path = ( $path /usr/local/cuda/bin )
```

Create /etc/ld.so.conf.d/cuda.conf

```
/usr/local/cuda/lib64
```



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