



How to install Nvidia drivers to CentOS 8 / RHEL 8 workstation with secure boot

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Pegasi Knowledge

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UPDATE: added kernel update notes

Just did this myself and wrote it down here. How to get your NVidia card working with NVidia drivers using UEFI secure boot. A compact list of commands to execute.

Download drivers

```
lspci | grep -i nvidia
```

Identify model and download latest Linux drivers from [NVidia](#).

Secure boot extras

Make a certificate, import it and reboot. We will use this key/cert with NVidia driver installer.

```
openssl req -new -x509 -newkey rsa:2048 -keyout  
/etc/pki/tls/private/nvidia.key -outform DER -out  
/etc/pki/tls/certs/nvidia.crt -nodes -days 36500 -subj "/CN=Graphics  
Drivers"  
mokutil --import /etc/pki/tls/certs/nvidia.crt  
sync  
reboot
```

Add necessary software

```
dnf groupinstall "Development Tools"  
dnf install libglvnd-devel elfutils-libelf-devel
```

Disable Nouveau

This should be enough for latest CentOS / RHEL 8:

```
grub2-editenv - set "$(grub2-editenv - list | grep kernelopts)  
nouveau.modeset=0"
```

The old way is to edit /etc/default/grub to add nouveau.modeset=0 in the end of line

CRUBCMDLINELINUX so it looks like this:

```
GRUB_CMDLINE_LINUX="crashkernel=auto <stuff deleted from here> nomodeset  
quiet nouveau.modeset=0"
```

Feel free to do it since it makes no harm. Next make grub config:

```
grub2-mkconfig
```

Disable nouveau module by creating vim /etc/modprobe.d/nvidia.conf and adding:

```
blacklist nouveau  
options nouveau modeset=0
```

And running:

```
dracut --force  
sync  
reboot
```

Install Nvidia driver

Use the credentials we created earlier to support secure boot. Answer “yes” to installation of NVIDIA's 32-bit compatibility libraries, overwrite existing libglvnd files and automatic update of your X configuration file.

```
systemctl isolate multi-user.target  
sh NVIDIA-Linux-x86_64-440.82.run -s --module-signing-secret-  
key=/etc/pki/tls/private/nvidia.key --module-signing-public-  
key=/etc/pki/tls/certs/nvidia.crt  
reboot
```

If boot is not successful do:

```
systemctl restart systemd-logind  
reboot
```

Kernel updates

When a kernel update is due you need to do the following:

- Update kernel (and other packages)
- Reboot

- Run the previous NVIDIA install command
- Reboot

So start with update and reboot:

```
dnf update  
reboot
```

Then log in again, open root shell and locate the previous install command:

```
history | grep NVIDIA
```

Here you get a list including the latest setup command in a line looking like this:

```
112 sh /home/user/Downloads/NVIDIA-Linux-x86_64-450.80.02.run -s --module-  
signing-secret-key=/etc/pki/tls/private/nvidia.key --module-signing-public-  
key=/etc/pki/tls/certs/nvidia.crt
```

Just re-run the command by typing the line number preceded by "!":

```
!112
```

And have another reboot:

```
sync  
reboot
```

That should cover the update procedure.

Comments

All comments and corrections are welcome.