[NVIDIA & ATI Graphics Driver Script for CentOS / RHEL](http://idolinux.blogspot.com/2010/06/nvidia-ati-graphics-driver-script-for.html)

I wanted a way for Linux workstations running CentOS 5 / RHEL 5 to automatically build the proprietary kernel modules for ATI / NVIDIA video cards on boot. Here is a simple script that will run the graphics driver installer whenever booting into a new kernel.

Do not mix vendor installers with yum installed RPM packages. Do one or the other. If you are on Fedora, I highly recommend not using this script and instead installing the *akmod-nvidia* and *xorg-x11-drv-nvidia* packages. Please take note of the ModulePath order in the example xorg.conf file below.  
*/etc/init.d/gfx* init script:

#!/bin/bash

# a script for rebuilding proprietary graphics drivers on boot as needed

### To enable this script...

# 1. download the proprietary driver installer from nvidia.com OR ati.com and move it to /usr/src/

# wget http://us.download.nvidia.com/XFree86/Linux-x86\_64/195.36.24/NVIDIA-Linux-x86\_64-195.36.24-pkg2.run

# mv NVIDIA-Linux-x86-195.36.24-pkg1.run /usr/src/

# 2. create a symlink to the installer as /usr/src/nvidia.run OR /usr/src/ati.run

# cd /usr/src/

# ln -s NVIDIA-Linux-x86\_64-195.36.24-pkg2.run nvidia.run

# 3. move this script to init.d, make it executable and link to runlevel 5

# mv gfx /etc/init.d/

# chmod +x /etc/init.d/gfx

# ln -s /etc/init.d/gfx /etc/rc5.d/S99gfx

# 4. reboot

### NVIDIA driver

# /lib/modules/2.6.18-92.1.18.el5/kernel/drivers/video/nvidia.ko

# nvidia-xconfig --twinview --xinerama

if [ -f /usr/src/nvidia.run ]; then

{

if [ -f /lib/modules/`uname -r`/kernel/drivers/video/nvidia.ko ]; then

{

echo "NVIDIA DRIVER PRESENT"

/sbin/insmod /lib/modules/`uname -r`/kernel/drivers/video/nvidia.ko

}

else

{

echo "NVIDIA DRIVER UPDATING"

/usr/src/nvidia.run -s

} fi

} fi

### ATI driver

# /lib/modules/2.6.18-92.1.18.el5/kernel/drivers/char/drm/fglrx.ko

# aticonfig --initial=dual-head --desktop-setup=horizontal --screen-layout=left --xinerama=on --resolution=1,1600x1200 --resolution=0,1920x1200

if [ -f /usr/src/ati.run ]; then

{

if [ -f /lib/modules/`uname -r`/kernel/drivers/char/drm/fglrx.ko ]; then

{

echo "ATI DRIVER PRESENT"

}

else

{

echo "ATI DRIVER UPDATING"

/usr/src/ati.run

} fi

} fi

To get an example xorg.conf for nvidia, use the *nvidia-xconfig* command-line utility. Something like:

# nvidia-xconfig --twinview --xinerama

Example */etc/X11/xorg.conf* file for dual-head on NVIDIA:

# nvidia-settings: X configuration file generated by nvidia-settings

# nvidia-settings: version 1.0 (buildmeister@builder26) Thu Feb 14 18:14:18 PST 2008

# Xorg configuration created by pyxf86config

Section "ServerLayout"

Identifier "Default Layout"

Screen 0 "Screen0" 0 0

InputDevice "Keyboard0" "CoreKeyboard"

EndSection

Section "ServerFlags"

Option "Xinerama" "0"

EndSection

Section "InputDevice"

Identifier "Keyboard0"

Driver "kbd"

Option "XkbModel" "pc105"

Option "XkbLayout" "us"

EndSection

Section "Monitor"

Identifier "Monitor0"

VendorName "Unknown"

ModelName "DELL 2208WFP"

HorizSync 30.0 - 83.0

VertRefresh 56.0 - 76.0

EndSection

Section "Files"

ModulePath "/usr/lib64/xorg/modules/extensions/nvidia"

ModulePath "/usr/lib64/xorg/modules/drivers"

ModulePath "/usr/lib64/xorg/modules"

EndSection

Section "Device"

#Driver "nv"

Identifier "Videocard0"

Driver "nvidia"

VendorName "NVIDIA Corporation"

BoardName "Quadro NVS 290"

Option "NoLogo" "true"

EndSection

Section "Screen"

Identifier "Screen0"

Device "Videocard0"

Monitor "Monitor0"

DefaultDepth 24

Option "TwinView" "1"

#Option "metamodes" "DFP-0: nvidia-auto-select +1680+0, DFP-1: nvidia-auto-select +0+0"

SubSection "Display"

Depth 24

EndSubSection

EndSection

To get an example xorg.conf for ati, use the *aticonfig* command-line utility. Something like:

aticonfig --initial=dual-head --desktop-setup=horizontal --screen-layout=left --xinerama=on --resolution=1,1600x1200 --resolution=0,1920x1200

Example */etc/X11/xorg.conf* file for dual-head on ATI:

# Xorg configuration created by pyxf86config

Section "ServerLayout"

Identifier "Default Layout"

Screen 0 "aticonfig-Screen[0]-0" 0 0

Screen "aticonfig-Screen[0]-1" LeftOf "aticonfig-Screen[0]-0"

InputDevice "Keyboard0" "CoreKeyboard"

EndSection

Section "Files"

EndSection

Section "Module"

EndSection

Section "ServerFlags"

Option "Xinerama" "on"

EndSection

Section "InputDevice"

Identifier "Keyboard0"

Driver "kbd"

Option "XkbModel" "pc105"

Option "XkbLayout" "us"

EndSection

Section "Monitor"

Identifier "aticonfig-Monitor[0]-0"

Option "VendorName" "ATI Proprietary Driver"

Option "ModelName" "Generic Autodetecting Monitor"

Option "DPMS" "true"

EndSection

Section "Monitor"

Identifier "aticonfig-Monitor[0]-1"

Option "VendorName" "ATI Proprietary Driver"

Option "ModelName" "Generic Autodetecting Monitor"

Option "DPMS" "true"

EndSection

Section "Device"

Identifier "Videocard0"

Driver "r500"

EndSection

Section "Device"

Identifier "aticonfig-Device[0]-0"

Driver "fglrx"

Option "DesktopSetup" "horizontal"

BusID "PCI:1:0:0"

EndSection

Section "Device"

Identifier "aticonfig-Device[0]-1"

Driver "fglrx"

BusID "PCI:1:0:0"

Screen 1

EndSection

Section "Screen"

Identifier "Screen0"

Device "Videocard0"

DefaultDepth 24

SubSection "Display"

Viewport 0 0

Depth 24

EndSubSection

EndSection

Section "Screen"

Identifier "aticonfig-Screen[0]-0"

Device "aticonfig-Device[0]-0"

Monitor "aticonfig-Monitor[0]-0"

DefaultDepth 24

SubSection "Display"

Viewport 0 0

Depth 24

Modes "1920x1200"

EndSubSection

EndSection

Section "Screen"

Identifier "aticonfig-Screen[0]-1"

Device "aticonfig-Device[0]-1"

Monitor "aticonfig-Monitor[0]-1"

DefaultDepth 24

SubSection "Display"

Viewport 0 0

Depth 24

Modes "1600x1200"

EndSubSection

EndSection

Posted 2nd June 2010 by [Gavin Burris](http://www.blogger.com/profile/03621751403310024701)