

23 Replies Latest reply: Nov 18, 2015 6:27 PM by John Ryan 



Hsin Wang Nov 10, 2015 1:49 PM

Computer hang after Red Hat update

This question has been **Answered**.

Yesterday I did the Red Hat update for the first time with our new host computer to a 600MHz spectrometer (DD2, running VJ 4.2 and RHEL 6.7, the HP computer was acquired through Agilent). This morning I tried to log out of a user account. The screen hang during the log out. I then force the HP the power down and restart.

The booting process hang after the following message:

"Red Hat Enterprise Linux Workstation 6.7 svc_run returned".

I am wondering what to do next. Previously I never did RHEL update. I did not even discover that I could not get any software at home without a subscription running properly. I am also under the impression that it is OK to update RHEL for the Agilent host.

Hsin



Correct Answer

by Hsin Wang on Nov 11, 2015 9:30 PM

John,

Thank you for the help. Eventually I gave up on rebuilding xorg.conf without the nvidia driver. I restored the original grub.conf and issued "sh NVIDIA-Linux-x86_64-352.55.run" that I got from nvidia website.

The install was pretty painless and it works now. I will just make sure I will never accept any updates from RHEL from now on.

Yes, I do have the offending /etc/modprobe.d/hp-disable-nouveau.conf file, and "/sbin/lsmmod | grep nvidia" produced

```
nvidia          8628567 32
i2c_core        29132 2 nvidia,i2c_i801
```

So possibly it might work out the other way. But in my view, there are too many judgements need to be made. I think NVIDIA driver is ultimately what I preferred.

Hsin



Helpful Answers by John Ryan, John Ryan

94 Views

Categories: Administration: Computer/Printer/Network, VNMRS / Direct-drive systems, DD2 systems

Tags:



Dan Iverson Nov 10, 2015 2:55 PM (in response to Hsin Wang)

Re: Computer hang after Red Hat update

This link sounds like the same problem. [Black screen with error message "svc-run returned" - how to fix?](#)

Like (0)



Hsin Wang Nov 10, 2015 5:12 PM (in response to Dan Iverson)

Re: Computer hang after Red Hat update

Dan,

I did rename /etc/X11/xorg.conf and reboot the system. This time it says;

nrmwebd is already running
svc_run returned

Examining the /etc/X11, I found
xorg.conf.nvidia-xconfig-original
is created with no content.

Does anyone know how to proceed? Can we ask Khan Hekmatyar whether he has any suggestions?

Hsin

Like (0)



John Ryan Nov 10, 2015 5:16 PM (in response to Hsin Wang)

Helpful Answer Re: Computer hang after Red Hat update

Hi Hsin,

If the Linux kernel was updated (which is likely) then your current version of the nVidia driver will not be compatible. You can press Ctrl-F2 to get to a text login and uninstall the nVidia driver to get the system working again. Once it's working you can download and re-install



the nVidia driver if you like (but it's only really necessary for imaging applications). Here are the commands you'll need to uninstall the nVidia driver:

```
yum erase dkms kmod-nvidia nvidia-x11-driv
```

We'll get rid of the old xorg.conf file too:

```
mv /etc/X11/xorg.conf /etc/X11/xorg.conf.old
```

To cover our bases, rebuild the initial ramdisk again:

```
dracut -f /boot/initramfs-`uname -r`.img `uname -r`
```

Type "reboot" to restart the system and let it boot normally.

See  [Re: login screen not coming up after RHEL 6.6 upgrade](#) for more information.

Cheers,
John

 Liked (1)



Hsin Wang Nov 11, 2015 11:44 AM (in response to John Ryan)

Re: Computer hang after Red Hat update

John,

I did not turn into text mode, but logged remotely and followed the steps you outlined. Alas, with reboot the screen hang after the same "svc_run returned".

I logged remotely again and found no xorg.conf was built. I grepped EE /var/log/Xorg* and found the most prominent error seems to be
[drm] KMS not enabled.

By now I am thoroughly confused by dkms, kmod, and now KMS. What should I do? Should I re-install "dkms kmod-nvidia"?

In desperation, I reinstalled dkms alone, thinking that it has something to do with KMS. Upon rebooting I saw
Starting Acquisition
nmrwebd already running
svc_run returned

then hang again.

Hsin



John Ryan Nov 11, 2015 6:06 PM (in response to Hsin Wang)

Re: Computer hang after Red Hat update



Hi Hsin,

Can you check your `/boot/grub/grub.conf` and make sure the `"rdblacklist=nouveau"` and `"nouveau.modeset=0"` entries are removed from any kernel lines. Reboot.

If that still doesn't work, can you check your `/var/log/Xorg.0.log` for errors? e.g. `"grep EE /var/log/Xorg.0.log"` and post that here.

John

 Like (0)

Hsin Wang Nov 11, 2015 7:43 PM (in response to John Ryan)

Re: Computer hang after Red Hat update



John,

Sorry I did not refresh the page and missed this earlier message. I did delete `"rdblacklist=nouveau"` and `"nouveau.modeset=0"` entries. But the results is the same.

Here is the grep EE

```
/var/log/Xorg.0.log: 48.482] Initializing built-in extension MIT-SCREEN-SAVER
[
/var/log/Xorg.0.log: 49.574] (EE) [drm] KMS not enabled
[
/var/log/Xorg.0.log: 49.574] (EE) [drm] KMS not enabled
[
/var/log/Xorg.0.log: 49.574] (EE) open /dev/dri/card0: No such file or directory
[
/var/log/Xorg.0.log: 49.574] (EE) open /dev/dri/card0: No such file or directory
[
/var/log/Xorg.0.log: 49.581] (EE) Unable to find a valid framebuffer device
[
/var/log/Xorg.0.log: 49.582] (EE) open /dev/fb0: No such device
[
/var/log/Xorg.0.log: 49.582] (EE) Screen 0 deleted because of no matching
```

```
[ config section.
/var/log/Xorg.0.log: 49.582] (EE) Screen 0 deleted because of no matching
[ config section.
/var/log/Xorg.0.log: 49.582] (EE) Screen 0 deleted because of no matching
[ config section.
/var/log/Xorg.0.log: 49.582] (EE) Device(s) detected, but none match those in
[ the config file.
/var/log/Xorg.0.log: 49.582] (EE)
[
/var/log/Xorg.0.log: 49.582] (EE) no screens found(EE)
[
/var/log/Xorg.0.log:
[
/var/log/Xorg.0.log: 49.582] (EE) Please also check the log file at
[ "/var/log/Xorg.0.log" for additional information.
/var/log/Xorg.0.log: 49.582] (EE)
[
/var/log/Xorg.0.log: 49.583] (EE) Server terminated with error (1). Closing log
[ file.
```

Hsin

 Like (0)



John Ryan Nov 11, 2015 6:24 PM (in response to Hsin Wang)



Re: Computer hang after Red Hat update

Hsin,

Sorry, I just saw that you already checked your Xorg.0.log and that it contained no error lines. That's very unusual if the X-server is not starting!

KMS (kernel mode-setting) and DKMS (dynamic kernel module support) are not related despite the similar acronyms 😊.

For a driver to work in Linux it must be compatible (i.e. compiled for) the currently running kernel. When you install updates, the dependency checking process usually ensures that all drivers etc. are upgraded alongside the kernel so the operation is seamless. Because the nVidia driver is third party, there is no way for the update to know anything about it so it gets left behind. When you restart X (i.e. log out or reboot), the server fails to start again. DKMS is a means of overcoming this which re-compiles third party drivers from source whenever the kernel is updated ensuring that the driver remains compatible with the new kernel. Unfortunately, DKMS

support for the nVidia driver disappeared from RHEL/CentOS many years ago (the fact that VnmrJ still installs the DKMS package is a legacy issue - it actually doesn't do anything).

I am not quite so fully versed on KMS - it's a feature which allows the kernel to control the mode of a graphics device.

You also mentioned kmod... This is an alternative to DKMS which packages up driver modules for specific kernels or ranges of kernel versions. There are no kmod packages for nVidia in the general Red Hat repositories. Back when I still used the nVidia driver I used the kmod-nvidia package from the ELrepo third-party repository. While it works well, there is still a requirement to reboot the computer (or manually reload the nVidia module) whenever the kmod-nvidia package is updated.

Ultimately, it's all a can of worms which (under RHEL/CentOS) has no perfect solution [Ubuntu on the other hand, uses a DKMS-based nVidia driver and I only ever have issues when I am using the pre-release version, otherwise it's seamless]. My recommendation is to uninstall the nVidia driver and never look back unless you have to.

It should be something simple that's still wrong with your system - we'll get to the bottom of it!

Is there any chance I might be able to SSH in to the system to take a look?

Cheers,
John

 Like (0)



Hsin Wang Nov 11, 2015 7:06 PM (in response to John Ryan)

Re: Computer hang after Red Hat update

John,

I think I am in trouble. The OS was not able to rebuild xorg.conf. One error message says KMS is not enabled.

Perhaps it has to do with the "rdblacklist=nouveau nouveau.modeset=0" statements in /etc/grub.conf? I learned that nouveau means nvidia.

I try to reinstall kmod-nvidia and nvidia-X11-drv with yum install, but no packages are available.

I went to NVIDIA site and downloaded "NVIDIA-Linux-x86_64-352.55.run". Should I run that? I am not even sure whether this is compatible with the video card. Indeed I don't

know what video card Agilent shipped with this HP Z420. How do I find that information? I don't get that from the HP BIOS.

BTW, I found that I could interrupt the booting process and select RHEL6.3, but since I removed the nvidia stuff, it did not work any more.

Hsin

 Like (0)



John Ryan Nov 11, 2015 7:15 PM (in response to Hsin Wang)



Re: Computer hang after Red Hat update

Hi Hsin,

First, don't worry about the KMS warning - I believe it's irrelevant to the X server. Second, you don't need an xorg.conf at all. Delete it if it exists (or rename it to keep it as a backup).

Yes, the nouveau driver is the open source nVidia driver which is the one shipped with Linux. In order for it to work it needs to not be blacklisted (which installing the proprietary nVidia driver does automatically). Remove the "rdblacklist=nouveau nouveau.modeset=0" statements and reboot. This should get you up and running. If not, check again for errors in Xorg.0.conf or type "dmesg" and look for anything nVidia or nouveau based.

Do not install/reinstall any nVidia based packages - you don't need them. While installing the nVidia driver from NVIDIA-Linux-x86_64-352.55.run might get the system working again in the short term, you will just have this same problem again next time the kernel is updated unless you resolve it properly now. (If you do go down this path, that driver version should be fine for the card shipped in modern HP systems).

Cheers,
John

 Like (0)



Hsin Wang Nov 11, 2015 8:13 PM (in response to John Ryan)



Re: Computer hang after Red Hat update

John,

Even though I deleted the "rdblacklist=nouveau nouveau.modeset=0" from the end of the kernel line (for 6.7), there is a section in /var/log/Xorg.0.log indicated that nouveau is being considered in building the graphics.

-

```
[ 48.027] Initializing built-in extension XFree86-
DRI
[ 48.027] Initializing built-in extension DRI2
[ 48.027] (II) LoadModule: "glx"
[ 48.067] (II) Loading
/usr/lib64/xorg/modules/extensions/libglx.so
[ 48.974] (II) Module glx: vendor="X.Org
Foundation"
[ 48.974]                                     compiled for 1.15.0, module
version = 1.0.0
[ 48.974]                                     ABI class: X.Org Server
Extension, version 8.0

[ 48.974] (==) AIGLX enabled
[ 48.974] Loading extension GLX
[ 48.974] (==) Matched nouveau as
autoconfigured driver 0
[ 48.974] (==) Matched nv as autoconfigured
driver 1
[ 48.974] (==) Matched modesetting as
autoconfigured driver 2
[ 48.974] (==) Matched fbdev as autoconfigured
driver 3
[ 48.974] (==) Matched vesa as autoconfigured
driver 4
[ 48.974] (==) Assigned the driver to the
xf86ConfigLayout
[ 48.974] (II) LoadModule: "nouveau"
[ 49.072] (II) Loading
/usr/lib64/xorg/modules/drivers/nouveau_drv.so
[ 49.111] (II) Module nouveau: vendor="X.Org
Foundation"
[ 49.111]                                     compiled for 1.15.0, module
version = 1.0.10
[ 49.111]                                     Module class: X.Org Video
Driver
[ 49.111]                                     ABI class: X.Org Video
Driver, version 15.0

[ 49.111] (II) LoadModule: "nv"
[ 49.124] (II) Loading
/usr/lib64/xorg/modules/drivers/nv_drv.so
```

At this point I feel if the NVIDIA provided driver works, I would rather accept it and make sure I will not install update any more. Perhaps I should try that.

Hsin

 Like (0)



John Ryan Nov 11, 2015 8:35 PM (in response to Hsin Wang)

Re: Computer hang after Red Hat update



Hi Hsin,

How you proceed is over to you. Installing the NVidia driver from the "NVIDIA-Linux-x86_64-352.55.run" package should work.

Something strange is going on though - several of the error messages in the Xorg.0.log are unusual. Can you check in /etc/modprobe.d and make sure none of the files there blacklist the nouveau driver. e.g. On my system I have /etc/modprobe.d/hp-disable-nouveau.conf with the lines "blacklist nouveau" and "options nouveau modeset=0". If you have a file like that, delete it and reboot.

You can use /sbin/lsmmod to list the loaded modules. Check for nouveau and nvidia (e.g. /sbin/lsmmod | grep nvidia) to see what is loaded. You don't want to see nvidia and you do want to see nouveau.

Again, is there any chance I can access the system? - I'm sure I can fix this!

J.

 Like (0)



Hsin Wang Nov 11, 2015 9:30 PM (in response to John Ryan)

Correct Answer Re: Computer hang after Red Hat update



John,

Thank you for the help. Eventually I gave up on rebuilding xorg.conf without the nvidia driver.

I restored the original grub.conf and issued "sh NVIDIA-Linux-x86_64-352.55.run" that I got from nvidia website.

The install was pretty painless and it works now. I will just make sure I



will never accept any updates from RHEL from now on.

Yes, I do have the offending `/etc/modprobe.d/hp-disable-nouveau.conf` file, and `"/sbin/lsmmod | grep nvidia"` produced

```
nvidia          8628567 32
```

```
i2c_core       29132 2 nvidia,i2c_i801
```

So possibly it might work out the other way. But in my view, there are too many judgements need to be made. I think NVIDIA driver is ultimately what I preferred.

Hsin

 Like (0)



John Ryan Nov 11, 2015 9:44 PM (in response to Hsin Wang)

Helpful Answer Re: Computer hang after Red Hat update



Hi Hsin,

Ok, it's your system 😊. I do strongly recommend keeping systems up-to-date so I don't agree with your decision to never install updates but that's just me. If you're behind a good firewall then you should be OK.

Your problem was almost certainly the `/etc/modprobe.d/hp-disable-nouveau.conf` file. I believe that removing it and rebooting would have solved your problem. It was blacklisting the nouveau driver preventing the kernel from loading it.

Presumably you ran `"/sbin/lsmmod | grep nvidia"` after you had re-installed the nVidia driver. If not, it implies it was never uninstalled in the first place.

An `/etc/X11/xorg.conf` is only required if you have the nVidia driver installed - otherwise Xorg will just use defaults and should just work assuming there are no other problems.

Glad you're up and running anyway.

Cheers,
John

 Like (0)



Hsin Wang Nov 12, 2015 4:26 PM (in response to John Ryan)

Re: Computer hang after Red Hat update

John,

Thank you very much for walking through this with me. I am going to label my using NVIDIA-driver as "Correct Answer" and your two answers as "Helpful Answers". Obviously it is disputable which one is more correct. One can say that I did not go for the permanent fix. But I wish to bring this post to an end, and it is successfully resolved for now.

Hsin

Like (0)



John Ryan Nov 12, 2015 6:37 PM (in response to Hsin Wang)

Re: Computer hang after Red Hat update

Hi Hsin,

No problem - I'm glad your system is up and running again! Ultimately, you're the one looking after your system so as long as your solution works for you, not much else matters.

Cheers,
John

Like (0)



Andrew Fowler Nov 12, 2015 4:46 PM (in response to John Ryan)

Re: Computer hang after Red Hat update

Hi Hsin,

I tend to agree with John that it's a good idea to keep the OS up to date (says the guy who still has some workstations in the lab running RHEL 4.x 😊)

I'd suggest keeping that nvidia*.run file around somewhere. Most software updates won't affect the video driver, but any time the kernel gets updated - which will presumably also update the kernel headers and libraries - you'll need to re-

build/re-install the driver by running the script again. It's relatively painless aside from seeing a bunch of errors and coming up into a text-only interface until you do it. I've generally found the proprietary nvidia driver to be stable, in my experience more so than the open source nouveau driver. Eventually the kernel will change something that will require downloading a newer version of the driver, though.

The other thing I'd suggest is if you've got a good, working xorg.conf file, back it up and even print out the part that defines the monitor. At least for older Redhat combined with newer monitors, getting all the sync and resolution information to behave is the hard part.

Andrew

 Like (0)



Hsin Wang Nov 13, 2015 3:22 PM (in response to Andrew Fowler)

Re: Computer hang after Red Hat update

Andrew,

You are probably right. I should never say never. Having gone through this once hopefully will give me confidence that I can deal with it painlessly next time.

The only trouble is that as the computer (or graphic card) ages, you may have to select a legacy NVIDIA driver. And then, which one? You may have to pull the graphic card out to find out what card you have.

Hsin

 Like (0)



Andrew Fowler Nov 13, 2015 3:40 PM (in response to Hsin Wang)

Re: Computer hang after Red Hat update

Hi Hsin,

Yes, at some point you may need to find a legacy driver, hopefully not too soon. I do recall at one point having to choose from 3 or 4 possibilities even when a card was semi-

recent. If you keep the driver that currently works, it should recompile against the current kernel for quite some time yet.

As for figuring out what card you have, you can always try running the lspci command (it typically lives in /sbin), which should at least give you enough information to do a meaningful search. For two Linux boxes we have in the lab, I get the following as part of the output - you can pipe the output to a grep for VGA to avoid digging through the other ~20 lines:

Dell Precision 390n on our 600:

01:00.0 VGA compatible controller: nVidia Corporation NV44 [Quadro NVS 285] (rev a1)

A much newer Dell with a Core i5 and no dedicated video card:

00:02.0 VGA compatible controller: Intel Corporation 2nd Generation Core Processor Family Integrated Graphics Controller (rev 09)

Andrew

 Like (0)



Eugenio Alvarado Nov 13, 2015 5:29 PM (in response to Hsin Wang)

Re: Computer hang after Red Hat update

If you add the ERepo repository (elrepo.org) to your repository list, you don't have to worry about kernels and nvidia driver mismatches as everything will be handled automatically. And to see which driver package is appropriate to your graphics card, install nvidia-detect from elrepo and run it. There are three different packages with different versions of the nvidia driver for current or older cards available. For example, if the card is recent all you have to do is install kmod-nvidia.

 Like (0)



John Ryan Nov 13, 2015 10:08 PM (in response to Eugenio Alvarado)

Re: Computer hang after Red Hat update

Hi Eugenio,

Yes, as I said, that is one solution but it's still not perfect - after the kmod-nvidia package has been updated it is necessary to reboot the computer. If you just log out of the existing user, the X-server will fail to start in the same manner Hsin experienced.

The ELrepo repository also contains fixed versions of the driver for legacy cards (kmod-nvidia-96xx, kmod-nvidia-173xx, kmod-nvidia-304xx, kmod-nvidia-340xx) and as you commented, the very useful nvidia-detect utility which will tell you which driver you need.

That said, the same information is available on the nVidia website if you want to keep using the drivers straight from the source.

Cheers,
John

 Like (0)



Andrew Fowler Nov 17, 2015 11:03 AM (in response to John Ryan)

Re: Computer hang after Red Hat update

Hi John,

You're right that the kmod-nvidia package will probably require a reboot to install (since it needs to compile the driver against the current kernel). However, from past experience that package typically only gets updated when along with a kernel update. So you'll need to reboot in any case unless you've somehow configured the box to do live kernel updates.

The updated kmod package tends to lag the new kernel by a few days - presumably so that it can be tested before release - so on the one Fedora box this is relevant to for me, I usually wait to let yum update the kernel until the video driver update is also available. We're well firewalled, so I'm not particularly worried about being a bit behind on patches.

Andrew

 Like (0)



Hsin Wang Nov 18, 2015 4:20 PM (in response to Andrew Fowler)

Re: Computer hang after Red Hat update

Hello, Eugenio, Andrew, and John,

Thank you for the input. I did consider putting ELRepo in my repository. But it is too much to manage right now. the driver from nvidia seems to work now.

I have to say the RHEL update is a pain. Yesterday, I decided to take up Andrew's advice to update the most recent updates. And the update itself hang without completion for a day. I checked my internet connection. It has been fine. I had to kill the updating process (no button to cancel) by rebooting. Fortunately it came back alive.

Right now I have pretty low opinion of Red Hat. My opinion is that if you are behind a good firewall, you should not accept updates.

Hsin

 Like (0)



John Ryan Nov 18, 2015 6:27 PM (in response to Hsin Wang)

Re: Computer hang after Red Hat update

Hi Hsin,

Sorry to hear that your problems are continuing. I've never had issues with the update itself crashing but I never use the GUI interface to do updates either. I always just run "yum upgrade" on the command line - that way I can see what's going on!

John

 Like (0)