RedHat 6.2 for kernel panic fix "7.1"

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RedHat 6.2 based machines kernel panic randomly

Issue:

Under certain conditions in an Ethernet network where machines generate multicast traffic, the SpycerAgent in combination with the vanilla 6.2 kernel (2.6.32-220) can cause a kernel PANIC.

Workaround:

If the SpycerAgent on an appliance is not needed it can be turned off.

Solution:

Download and install the kernel 2.6.32-220-7.1 patch.

Download link: www.dvsus.com/gold/san/upd-2.6.32-220.7.1.zip

Before

```
# uname -a
Linux 12KMDS-2 2.6.32-220.el6.x86_64 #1 SMP Wed Nov 9 08:03:13 EST 2011 x86_64 x86_64 x86_64 GNU/Linux
```

After

```
# uname -a
Linux 12KMDS-2 2.6.32-220.7.1.el6.x86_64 #1 SMP Fri Feb 10 15:22:22 EST 2012 x86_64 x86_64 x86_64 GNU/Linux
```

Command history

```
# rpm -Uvh kernel-firmware-2.6.32-573.1.1.el6.noarch.rpm
# rpm -Uvh kernel-devel-2.6.32-220.7.1.el6.x86_64.rpm
# rpm -Uvh kernel-2.6.32-220.7.1.el6.x86_64.rpm
```

Session log

```
# rpm -Uvh kernel-firmware-2.6.32-573.1.1.el6.noarch.rpm
warning: kernel-firmware-2.6.32-573.1.1.el6.noarch.rpm:
Header V3 RSA/SHA256 Signature, key ID fd431d51: NOKEY
Preparing...                ########################################### [100%]
1:kernel-firmware        ########################################### [100%]

# rpm -Uvh kernel-devel-2.6.32-220.7.1.el6.x86_64.rpm
warning: kernel-devel-2.6.32-220.7.1.el6.x86_64.rpm:
Header V3 RSA/SHA256 Signature, key ID fd431d51: NOKEY
Preparing...                ########################################### [100%]
1:kernel-devel          ########################################### [100%]

# rpm -Uvh kernel-2.6.32-220.7.1.el6.x86_64.rpm
warning: kernel-2.6.32-220.7.1.el6.x86_64.rpm:
Header V3 RSA/SHA256 Signature, key ID fd431d51: NOKEY
Preparing...                ########################################### [100%]
1:kernel                ########################################### [100%]
```

Update on a Venice server

In addition to the generic kernel packages, the NVidia driver has to be reinstalled. You need the NVidia installer in version *331.38* and place it into the /usr/local/src/nvidia folder if not already existent.

Generate a copy of the xorg.conf prior the update:

```
# cp -p /etc/X11/xorg.conf /etc/X11/xorg.conf.org
```

Then update the kernel packages

```
# rpm -Uvh kernel-firmware-2.6.32-573.1.1.el6.noarch.rpm
# rpm -Uvh kernel-devel-2.6.32-220.7.1.el6.x86_64.rpm
# rpm -Uvh kernel-2.6.32-220.7.1.el6.x86_64.rpm

# reboot
```

Intercept the Grub boot-loader by entering **[e]** for edit. Select the 2nd line starting with "*kernel /vmlinuz-2.6.32-220-7.1.el6.x86_64 ro root=/dev/*" and add the word single at the end. Hit **[ESC]** and then **[b]** for boot. The server will boot into single user mode without graphical environment or network. From there you run the Nvidia installer package.

```
# /usr/local/src/nvidia/NVIDIA-Linux-x86_64-331.38.run
```

- Confirm that you want to re-install the driver.
- Confirm that you want to enable 32bit libraries
- Decline to configure the X configuration

If you stuck on the driver installation and receive an error message that the nouveau drivers is already loaded and the NVidia driver is incompatible, follow the steps below. If not, co straight to the next section!

Add the *nouveau* driver to the blacklist by editing the */etc/modprobe.d/blacklist.conf* file and add:

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

Rebuild the initrd file

```
# mkinitrd /boot/initramfs-2.6.32-220.7.1.el6.x86_64.img 2.6.32-220.7.1.el6.x86_64
```

reboot and intercept the grub loader to add the word "single" in the end.

Update the configuration by restoring the original xorg.conf

```
# cp -p /etc/X11/xorg.conf.org /etc/X11/xorg.conf
# reboot
```

If the Desktop still does not come up (or screen resolution is not feasible for the monitor, boot into the single mode again. Once rebooted, delete the xorg.conf file and tell NVidia to generate a new on the next boot.

```
# rm /etc/X11/xorg.conf
# nvidia-xconfig --allow-empty-initial-configuration
# reboot
```

Notes

- If ATTO cards are used, the Celerity driver needs to be reinstalled after update.