THE **Z** EDT   ☰

📁 Linux

Restarting USB subsystem in CentOS

🕐 1 Mar 2014   🏷 centos, linux, lockup, restart, usb

After a long uptime specific (cheap) devices or components connected to the USB ports lock up or malfunction. Unplugging and plugging them usually fixes issues, but physical access to the system (especially a remote server) is neither always possible or desirable.

In cases like this, Linux (unlike Windows) can trigger a USB subsystem restart by deactivating and reactivating the USB controller(s).

The hardware ID(s) of the controllers differ from manufacturer to manufacturer and from hardware to hardware. So the first thing to do is find out the correct hardware ID(s).

Running

```
cd /sys/bus/pci/drivers/ehci_hcd
ls
```

returns a list of one or more controller IDs, in the form of `0000:00:xx.y`.

Edit: For USB 3.0 controllers, use instead

```
cd /sys/bus/pci/drivers/xhci_hcd
ls
```

On my system which has two AMD USB controllers, the following IDs are found:

```
0000:00:12.2  0000:00:13.2  bind  module  new_id  remove_id  uevent  unbind
```

Now that the ID or IDs are known, you need to run a set of commands that trigger the disabling and re-enabling of that device. You can run this command for a specific controller (if you know which one) or for all controllers if you don't have anything critical connected to the USB. The command is:

```
echo -n "0000:00:xx.y" > unbind
```

Remember to enable them back:

```
echo -n "0000:00:xx.y" > bind
```

where instead of `xx.y` you fill in the correct set of numbers to use the IDs discovered above.

This procedure is the same for all RHEL-like distributions (Red Hat Enterprise, CentOS, Fedora).

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Anonymous   5 months ago

Thanks too !
                                                                        Reply

Tempohouse   2 years ago

Golden – thanks! Saved me rebooting and losing my precious uptime 🙂
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