

RE: ps/2 mouse problem with KVM switch

Source: <http://linux.derkeiler.com/Mailing-Lists/Kernel/2004-02/3017.html>

From: Robert White (rwhite_at_casabyte.com)

Date: 02/12/04

To: "'Marko Macek'" <Marko.Macek@gmx.net>, <vojtech@suse.cz>
Date: Thu, 12 Feb 2004 14:29:24 -0800

Note that the KVM Switch (typically) implements an intermediate "device" for the mouse so that when you are switched away to the other machine, the first machine is still "talking to something".

This has the less-than-desireable effect of causing the mouse device "inside the switch" to act as a largest-common-denominator. Consequently many of the special features and peculiarities of your real device may not be accessible to your computer.

A particular, and better-documented, example of this can probably be found by trying to hook up a "new-fangled" keyboard (with the media control key cluster across the top and such) to your windows box. When the keyboard drivers cannot find the special buttons and you call the KVM switch vendor they will promptly tell you about how all those hot extra buttons are not supported with their product, have a nice day, good-bye... 8-)

The same things go for your mouse, but are not as well documented and accessible to the KVM help desk weasels.

You should find that if you select a "much more generic" mouse configuration "everything works fine".

Some newer windows drivers "look past" the switch and activate the mouse features anyway.

Regardless, if your "other" computer is initializing the mouse through voodoo and dark magic to increase the reporting (baud?) rate and such, when you toggle to the Linux box you will see all sorts of unhappiness. The inverse is also true, if the windows driver is expecting fast-and-feature-full and the side trip to Linux has set things back to mundane, the return to Windows will be "exciting"

Ibid for switching between two differently-abled Linux boxes, or two windows boxes with different driver revisions and settings.

It got so bad for me in a couple of places that I have re-mastered the art of the keyboard shortcut and don't have my mouse plugged into the KVM switch

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at all, and only mouse when using my "prime" environment. (for emergency mousing on "the other box" I have an old mouse plugged in and set aside.)

More often than not I just hook up one box with an near-optimal configuration and then use VNC from that box to reach out to all the others.

A/The KVM switched environment should be considered "imperfect" for almost all other-than-stock uses.

(My optimal configuration that saves heartache)

2-Port plasma flat panel

DVI port connected to my primary use machine

VGA port connected to my KVM

Keyboard (no special buttons 8-) connected to KVM

Mouse connected to Primary Machine via USB

KVM keyboard ports connected to all machines

KVM mouse ports connected to all machines *EXCEPT* primary

Stand-by mouse connected to KVM

Normally I am use the directly connected mouse and monitor.

When I switch to any other machine via the KVM the VGA port comes live on the monitor and I touch the "other input source" button on the monitor too.

As long as I am visiting the other machines I stay VGA. When I switch back to the primary the VGA feed goes dead and the monitor automatically switches back to DVI.

So now It takes two button presses to switch away, but only one to home back.

Less than optimal, yes, but technologically sound. Since there is no "soft reset" behavior provided by the PS/2 standard, let alone any way for the KVM switch to signal the driver that such logic needs to be invoked in software, the real truth of the issue is that this is a limitation inherent in the design of the PS/2 interface and any solution other than greatest-common-denominator will be unstable.

It would have been better if the PS/2 (and keyboard) interface were designed with hot-plugability in mind and the KVM switch did nothing but detach the devices so that a "switch to" even caused the software to rediscover the device and reset the parameters. The thing was that part of the core purpose of the KVM today was designed to prevent the old "keyboard not found, press F1 to continue booting" nonsense... Thank You Pane/Webber. 8-)
Rob.

-----Original Message-----

From: linux-kernel-owner@vger.kernel.org

[mailto:linux-kernel-owner@vger.kernel.org] On Behalf Of Marko Macek

Sent: Sunday, February 08, 2004 1:35 AM

RE: ps/2 mouse problem with KVM switch

Linux-Kernel: RE: ps/2 mouse problem with KVM switch

To: vojtech@suse.cz
Cc: linux-kernel@vger.kernel.org
Subject: ps/2 mouse problem with KVM switch

Hello!

Kernel 2.6.2, XFree86 4.3.0

I am using a Logitech MouseMan 2xOptical mouse connected through a KVM switch.

By default the mouse is detected as "ImExPS/2 Logitech Explorer Mouse". The problem is that the mouse doesn't work. It is too slow and no mouse clicks work. If I move it very fast I sometimes get a random click event. I specify `psmouse.proto=bare` mouse works OK, but not the wheel :((I have seen at least one "lost synchronization").

Specifying `psmouse.proto=imps` or `exps` doesn't help.

Without the KVM switch all is ok (as much as I tested under 2.6.0).

Under 2.4 mouse works perfectly, wheel and all.

I am using `/dev/input/mice` under XF86 (kernel does complain about X using direct hardware for keyboard and gives a bunch of errors).

GPM shows the same behavior if I run it (I'm not using it).

What else can I do?

Regards,

MArk

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