

Re: Mouse issues on IBM @server xSeries 335 using OSR5.0.6

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Bela Lubkin <belal@sco.com> wrote in message news:<20030722001338.GD24551@sco.com>...

> *Edward Hooper wrote:*

>

> > *I have two of the above mentioned machines running OpenServer 5.0.6,
> > sharing a keyboard, monitor and mouse using the special pass through
> > feature on these servers. For those that don't know, the xSeries 335
> > has two non-standard connectors on the back for KVM (one input, the
> > other output) so they can be stacked and use one set of IO devices.
> > Sort of like an internal KVM switch. The problem I have is when I
> > switch from one server to the other, the mouse no longer works
> > properly. It has a jerky motion and does not read the button clicks
> > correctly. As an example, double left button click acts like a single
> > right button click, but a single left button click will select the
> > object under the cursor (sometimes).*

> >

> > *I had the mouse configured as a 'High Resolution Keyboard Mouse: PS/2
> > (wheel)' and switched it to Low, but it didn't change a thing.*

> >

> > *I've tried looking for a BIOS setting to handle headless operations
> > for the mouse, but can only find it for the keyboard, video, and
> > floppy.*

>

> *Does this happen every time you switch the internal KVM, or only
> sometimes? What happens if the mouse is already in the bad state, and
> you switch the KVM away and back again -- does it get even worse, stay
> the same, or go back to normal?*

>

> *Try flipping away, flipping back, not touching the mouse, flipping away,
> flipping back, _then_ try the mouse. Try this with increasing numbers
> of back-and-forth flips before you touch the mouse; up to a total of 4.
> I am not suggesting these as workarounds, but probes to try to
> understand the problem.*

>

> *What I'm trying to probe is: the keyboard mouse driver expects to see
> data from the keyboard mouse in a certain sequence. It expects a packet
> of 3 or 4 bytes (depending on whether it's a non-wheel or wheel mouse).*

> I'm imagining what would happen if, during the KVM flip, the driver saw
> a single byte of garbage. It might think it was the first byte of a
> packet, after which it would be off by one in interpreting packets. If
> each flip produces one garbage byte, flipping 3 or 4 times might get you
> back in sync.
>
> There's a problem with this theory: the driver attempts to detect this
> condition by rejecting additional bytes of a mouse packet if too much
> time has elapsed (defined as 1/4 second). This defensive check should
> prevent the above scenario. But maybe it doesn't quite work right.
>
> To enhance your testing, you can turn on a keyboard mouse driver debug
> flag. The flag is `kbm_noisy` and the easiest thing is to turn it on in
> your live kernel. Do this:
>
> #/etc/scodb -w
> scodb> kbm_noisy=1
> scodb> q
>
> The change will persist until you reboot (or change it back to 0 in the
> same manner). I would like to know whether you get any "kbmintr"
> warnings with it turned on, when the mouse is in the bad state.
>
> You can also set a second variable, `kbm_dbg`, to values of 1 or 2.
> Setting it to 1 causes it to print information on what it's sending up
> to the mouse reader; 2 causes it to additionally print the actual mouse
> bytes as they are received. 0 turns it off. This output is extremely
> verbose for practical purposes, but might be helpful in understanding
> your problem.
>
> All of the output produced by these two debug variables appears on the
> console. Under X, it will appear in an "Error" window. You will
> probably find it easier to decipher behavior on a text multiscreen. In
> particular, set `kbm_dbg=2` and flip back and forth, see if the act of
> flipping is producing any mouse bytes.
>
> >Bela<

I set the debug flags as you mentioned (kbm_noisy=1 & kbm_dbg=2) with the following results:

- 1) Switching between servers using the built in KVM switch does not generate a signal that the mouse driver is picking up.
- 2) After a time, the debug messages stop displaying on the console, but the mouse continues to function (sort of: same problem as before).
- 3) Switching rapidly between servers does not change behavior of the mouse. (I tried doing it one, two, three and four times...)

4) Switch between virtual consoles on the same server unsticks the debug output (see #2). But not all of the time...

And now I see that the graphical desktop (on tty02) has stopped functioning. I had to run 'scologin stop' and 'scologin start' to bring it back.

Maybe I'm using the wrong driver here. Is there a special driver for the IBM series servers that is needed? When I looked up the server on the SCO website to see if it was certified, the page with all of the information showed which oss packages to load (already done) but didn't mention a special mouse driver that was required. Just as an experiment I will reboot the server that has the mouse plugged in directly and leave it there, to see if the mouse goes south all on it's own...

Thanks for the help so far!

Edward Hooper
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