Subject: Re: [PATCHSET 3/4] sysfs: divorce sysfs from kobject and driver model
Posted by Greg KH on Wed, 10 Oct 2007 20:44:49 GMT
View Forum Message <> Reply to Message

On Wed, Oct 10, 2007 at 07:16:48AM -0600, Eric W. Biederman wrote:
> Greg KH <greg@kroah.com> writes:
>
> > On Fri, Oct 05, 2007 at 06:12:41AM -0600, Eric W. Biederman wrote:
> >> Greg KH <greg@kroah.com> writes:
> >> >
> >> >> Also fun is that the dev file implementation needs to be able to
> >> >> report different major:minor numbers based on which mount of
> >> >> sysfs we are dealing with.
> >> >
> >> > Um, no, that's not going to happen. /dev/sda will _always_ have the
> >> > same major:minor number, as defined by the LSB spec. You can not break
> >> > that at all. So while you might not want to show all mounts
> >> > /sys/devices/block/sda/ the ones that you do, will all have the LSB
> >> > defined major:minor number assigned to it.
> >>
> >> Hmm. If that is in the LSB it must come from
> >> Documentation/devices.txt
> >
> > Yes, that is the requirement.
> >
> >> I'm not after changing the user visible major/minor assignments.
> >
> > Oh, I misunderstood what you wrote above then.
>
> My above sentence is slightly misleading. That should have been.
> I am not after changing the device name to major:minor assignments
> as specified in Documentation/devices.txt.
>
> So within a single device namespace everything is normal and as it
> always has been. Weirdness only ensues when you look across device
> namespaces.
>
> >> Let me see if a concrete example will help. Suppose I have
> >> have a SAN with two disks: disk-1 and disk-2. I have
> >> two machines A and B. On machine A I get the mapping:
> >> sda -> disk-1, sdb ->disk-2. On machine B I wind up with
> >> a different probe order so I get the mapping: sda -> disk-2
> >> sdb ->disk-1.
> >
> > Ok.
> >
> >> To be very clear by sda I mean the block device with major 8 and
> >> minor 0, and by sdb I mean the block device with major 8 and minor

> >> 16.
> >
> > Ok.
> >
> >> So I decide I want an environment on machine B that looks just
> >> like the environment on machine A, so I can bring transfer over
> >> a running program or whatever. So I run around looking at UUID
> >> labels and what not and I discover that the machine B knows disk-1 as
> >> sdb and that machine A knows disk-1 as sda. So I want to say:
> >> /sys/devices/block/sdb show up in this other device namespace as
> >> /sys/devices/block/sda.
>
> >
> > Ah, but if you do that then the "other" device namespace would have
> > /sys/devices/block/sda/dev be 8:16, right?
>
> No. The "other" device namespace I would construct on machine B to
> look just like the device namespace that existed on machine A.
> Making /sys/devices/block/sda would still be 8:0.
>
> So to be very clear on machine B when talking about disk-1 I would have.
> initial device namespace:
>   /sys/devices/block/sdb
>   /sys/devices/block/sdb/dev 8:16
>
> "other" device namespace:
>   /sys/devices/block/sda
>   /sys/devices/block/sda/dev 8:0
>
> Similarly on machine B when talking about disk-2 I would have.
> initial device namespace:
>   /sys/devices/block/sda
>   /sys/devices/block/sda/dev 8:0
>
> "other" device namespace:
>   /sys/devices/block/sdb
>   /sys/devices/block/sdb/dev 8:16
>
> So between the two devices namespaces on machine B the two disks
> would exchange their user visible identities.

Ah, ok, that makes more sense.

And seems quite difficult to do, good luck with that :)

greg k-h

_____
Containers mailing list