
Subject: Re: [RFC][PATCH 0/7] Clone PTS namespace
Posted by [ebiederm](#) on Wed, 09 Apr 2008 22:15:13 GMT
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On Tue, 2008-04-08 at 17:53 -0700, H. Peter Anvin wrote:

> sukadev@us.ibm.com wrote:

> > Devpts namespace patchset

> >

> > In continuation of the implementation of containers in mainline, we need to

> > support multiple PTY namespaces so that the PTY index (ie the tty names) in

> > one container is independent of the PTY indices of other containers. For

> > instance this would allow each container to have a '/dev/pts/0' PTY and

> > refer to different terminals.

> >

>

> Why do we "need" this? There isn't a fundamental need for this to be a

> dense numberspace (in fact, there are substantial reasons why it's a bad

> idea; the only reason the namespace is dense at the moment is because of

> the hideously bad handling of utmp in glibc.) Other than indicies, this

> seems to be a more special case of device isolation across namespaces,

> would that be a more useful problem to solve across the board?

In short application migration. When you move a running applicaiton from one machine to another you want to be able to keep the same pseudo devices.

The isolation that you have noticed is also an important application and like the rest of the namespaces if we can solve the duplicate identifier problem needed to restore checkpoints we also largely solve the isolation problem.

This problem is much larger then ptys. ptys are the really in your face aspect of it. There are a more pseudo devices in the kernel and it is the device number to device mapping that we are abstracting. So this really should be done as a device namespace not a pty namespace.

I would be happy if the first version of the device namespace could not map anything but pty's (assuming an incremental implementation path). I really don't think we should do a special case for each kind of device.

Oh and just skimming the patch summary I'm pretty certain this implementation breaks /sys/class/tty/ptyXX/uevent. Which is another reason why it would be good to have a single device namespace. So we only to capture one more namespace and figure out how to deal with it when mounting sysfs.

Eric

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