
Subject: Re: [PATCH 5/7]: Determine pts_ns from a pty's inode.

Posted by [serue](#) on Tue, 25 Mar 2008 21:14:06 GMT

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Quoting Serge E. Hallyn (serue@us.ibm.com):

> Quoting sukadev@us.ibm.com (sukadev@us.ibm.com):

> >

> > From: Sukadev Bhattiprolu <sukadev@us.ibm.com>

> > Subject: [PATCH 5/7]: Determine pts_ns from a pty's inode.

> >

> > The devpts interfaces currently operate on a specific pts namespace

> > which they get from the 'current' task.

> >

> > With implementation of containers and cloning of PTS namespaces, we want

> > to be able to access PTYs in a child-pts-ns from a parent-pts-ns. For

> > instance we could bind-mount and pivot-root the child container on

> > '/vserver/vserver1' and then access the "pts/0" of 'vserver1' using

> >

> > \$ echo foo > /vserver/vserver1/dev/pts/0

> >

> > The task doing the above 'echo' could be in parent-pts-ns. So we find

> > the 'pts-ns' of the above file from the inode representing the above

> > file rather than from the 'current' task.

> >

> > Note that we need to find and hold a reference to the pts_ns to prevent

> > the pts_ns from being freed while it is being accessed from 'outside'.

> >

> > This patch implements, 'pts_ns_from_inode()' which returns the pts_ns

> > using 'inode->i_sb->s_fs_info'.

> >

> > Since, the 'inode' information is not visible inside devpts code itself,

> > this patch modifies the tty driver code to determine the pts_ns and passes

> > it into devpts.

> >

> > TODO:

> > What is the expected behavior when '/dev/tty' or '/dev/ptmx' are

> > accessed from parent-pts-ns. i.e:

> >

> > \$ echo "foobar" > /vserver/vserver1/dev/tty)

> >

> > This patch currently ignores the '/vserver/vserver1' part (that

>

> The way this is phrased it almost sounds like you're considering using

> the pathnames to figure out the ptsns to use :).

>

> It's not clear to me what is the sane thing to do.

>

> what you're doing here - have /dev/ptmx and /dev/tty always use

> current->'s ptsns - isn't ideal.

>

> It would be nicer to not have a 'devpts ns', and instead have a

> full device namespace. However, then it still isn't clear how to tie

> /vs/vs1/dev/ptmx to vs1's device namespace, since there is no device

> fs to which to tie the devns.

>

> We could tie the devns to a device inode on mknod, using the devns of

> the creating task. Then when starting up vs1, you just have to always

> let vs1 create /dev/ptmx and /dev/tty. I can't think of anything

> better offhand.

>

> Other ideas?

I suppose you could just create /dev/pts/ptmx and /dev/pts/tty.

Recommend that in containers /dev/ptmx and /dev/tty be symlinks

into /dev/pts. Applications don't need to change. If

ptmx_open() sees that inode->i_sb is a devptsfs, it gets the

namespace from the sb. If not, then it was a device in /dev

and it gets the namespace from current.

-serge

Containers mailing list

Containers@lists.linux-foundation.org

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