

(sorry from the delay, been away :)

Eric W. Biederman wrote:

> "Serge E. Hallyn" <serue@us.ibm.com> writes:

>

>> Sorry, I was focusing on the virtual server needs.

>>

>> devpts is it's own fs so I was fully expecting to make it mountable

>> multiple times so a container can have it's own /dev/pts/0. So what

>> other virtual devices would we want to be able to rec-reate for a

>> migrated application? (I wonder (a) what gregkh will say about having

>> a device namespace, and (b) what the sysfs implications will be)

>

> Depends. There are things like the loop device that could be interesting.

> There may be some others. I haven't looked at it enough detail to get

> beyond the fact that in some sense it isn't just limited to pts devices.

>

> A multimount devpts is interesting though.

Devices I had to deal with (in zap) so far - to be able to ckpt/restart  
(and migrate) a desktop session:

\* /dev/rtc (e.g. for mplayer)

\* /dev/dsp

\* /dev/random ? (to isolate entropy pools ?)

\* virtual consoles - e.g. in zap, an X server that uses a virtual device  
runs inside a pod/container/VE (and X per-se requires a virtual console)

\* virtual terminals - e.g. in zap we allow access to a pod from the host  
without a need to run 'sshd' inside and setup a network in the pod. (Then  
with a suitable utility and network access to the host, this also allows  
sort of remote (a-la serial) console access).

>From inside the pod it looks like /dev/tty{1,2,...}, so one can run 'getty'  
processes inside the pod. From the outside (for the admin, e.g.) it is an  
extended /dev/tty that has an extra ioctl to multiplex access, so the  
admin (program) can ask to be connected to tty X of pod Y, and it will  
connect to that console (like connecting via serial line).

The main advantage is that as a virtual device it can be migrated (with  
its buffers, if not empty, as they reside inside the pod) so upon restart  
they go with the 'getty' processes that use them. The (old) admin will  
see the line dropped, and the (new) admin after the migration can connect

at the new machine.

Oren.

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Containers mailing list

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