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Subject: Re: [RFC][PATCH] Do not set /proc inode->pid for non-pid-related inodes  
Posted by [ebiederm](#) on Tue, 20 Mar 2007 04:07:32 GMT

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Dave Hansen <[hansendc@us.ibm.com](mailto:hansendc@us.ibm.com)> writes:

> On Mon, 2007-03-19 at 20:04 -0600, Eric W. Biederman wrote:  
>> Dave Hansen <[hansendc@us.ibm.com](mailto:hansendc@us.ibm.com)> writes:  
>> Regardless I would like to see a little farther down on  
>> how we test to see if the pid namespace is alive and how we  
>> make these functions do nothing if it has died.  
>  
> That shouldn't be too hard. We have access to the superblock pretty  
> much everywhere, and we now store the pid\_namespace in there (with some  
> patches I posted earlier).

Sounds right. I don't think my original version had that. Which  
changes the rules a little bit.

>> I would also  
>> like to see how we perform the appropriate lookups by pid namespace.  
>  
> What do you mean?

`proc_pid_readdir ... next_tgid()`.

>> Basically I want to see how we finish up multiple namespace support  
>> for /proc before we start with the micro optimizations.  
>  
> Serge was tracking down some weird /proc issues and noticed that we  
> expect a `pid_nr==1` for the pid namespace as long as it has a /proc  
> around. That is an assumption doesn't always hold now.

Maybe. It really depends on how we define a namespace exiting.  
That must be in the lxc tree.

There should be no code in the -mm or in Linus's tree that has  
that property.

While I'm not categorically opposed to supporting things like that it  
but it is something for which we need to tread very carefully because  
it is an extension of current semantics. I can't think of any weird  
semantics right now but for something user visible we will have to  
support indefinitely I don't see a reason to rush into it either.

>> I'm fairly certain this patch causes us to do the wrong thing when  
>> the pid namespace exits, and I don't see much gain except for the  
>> death of `find_get_pid`.

>  
> In the default, mainline case, it shouldn't be a problem at all. We  
> don't have the init pid namespace exiting.

True but we are getting close. And it is about time we worked up patches for that so our conversations can become less theoretical.

> Shouldn't the lifetime of things under a /proc mount be tied to the life  
> of the mount, and not to the pid\_namespace it is tied to? It seems  
> relatively sane to me to have a /proc empty of all processes, but still  
> have /proc/cpuinfo even if all of its processes are gone.

That is what is implemented. When the pid namespace goes away there are no more pid directories, and the /proc/self symlink goes away. But everything else remains.

If you look proc\_root\_readdir is not affected when the pid namespace goes away. Just proc\_pid\_readdir.

Everything in fs/proc/base.c is about pid files in one way or another.

> pid\_delete\_dentry() looks like the remaining place that really cares.  
> It would be pretty easy to have it check the pid namespace.

Sure although it also needs the pid check for files that have it as the process can go away sooner.

Eric

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