Subject: Re: Kernel text size with pid namespace
Posted by Pavel Emelianov on Thu, 20 Sep 2007 09:13:22 GMT
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sukadev@us.ibm.com wrote:
> Matt,
>
> The pid-namespace patcheset (http://lkml.org/lkml/2007/8/10/118)
> was added to the -mm tree in 2.6.23-rc3-mm1.
>
> With CONFIG_CC_OPTIMIZE_FOR_SIZE=y this patchset increases the kernel
> text size by about 5K (closer to 6K when the config token is set to N).

Well, this is a new functionality, so the vmlinux size has to increase.
And as Matt has noticed 5k is not that bad :)

> As a quick test, I uninlined several helper functions and with this
> the text size increased by about 4K. But since most of these inline
> functions are used in process creation/termination, we would need to
> keep them inline, when optimizing for performance.

I'd keep them inline for performance reasons.

> We also do not have a config token to select pid namespace (its always
> enabled).

This was one of Andrew's requirements. However, I assume that we can
have the cloning code under this option.

> Is there a cause for concern with the 5K to 6K increase in text size ?
> If so, can/should we conditionally inline some functions ? Or move
> some pid namespace creation code under CONFIG_TINY or something ?
> Are there other techniques besides uninling we could apply ?
>
> For reference, I am including below, some numbers for 2.6.23-rc2-mm2
> kernel for an x86_64 config file. In the following filenames:
>
> "clean" no pid ns patches
> "opt-size" CONFIG_CC_OPTIMIZE_FOR_SIZE=y
> "no-opt" CONFIG_CC_OPTIMIZE_FOR_SIZE=n
> "uninline" uninline several new inline functions.
>
> $ size vmlinux*
>
>   text   data   bss   dec   hex filename
>
> 6016101 906266 772424 7694791 7569c7 vmlinux-clean-no-opt-size
> 6021869 906330 772424 7700623 75808f vmlinux-pidns-no-opt-size

```
> 6020805  906330  772424 7699559  757c67 vmlinux-pidns-no-opt-uninline-task-pid
>
> 5299192  906330  772424 6977946  6a799a vmlinux-clean-opt-size
> 5304588  906394  772424 6983406  6a8eee vmlinux-pidns-opt-size
> 5303348  906394  772424 6982166  6a8a16 vmlinux-pidns-opt-size-uninline-task-pid
>
> Thanks,
>
> Suka
>
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