Subject: Kernel text size with pid namespace
Posted by Sukadev Bhattiprolu on Thu, 20 Sep 2007 00:16:44 GMT
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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).

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.

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

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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