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Subject: Re: Kernel text size with the pid namespaces fixes  
Posted by [Pavel Emelianov](#) on Tue, 25 Sep 2007 14:32:44 GMT  
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Cedric Le Goater wrote:

> Hello Pavel !

>

> Pavel Emelianov wrote:

>> Hi, Suka

>>

>> I have posted tree patches with un-inlining of some macros

>> and static inline calls that are expanded into another call.

>>

>> At my i386 notebook this saved about half-a-kilo from the

>> vmlinux. Could you please check these patches at your

>> boxes/configs to see how much progress we have here.

>>

>> Here's the combined patch for 2.6.24-rc8-mm1

>

> on my qemu configuration, scripts/bloat-o-meter gave the following

> results.

>

> it would be interesting to run some micro benchmark. Did you have

> time to do that ?

>

> Thanks,

>

> C.

>

> add/remove: 9/0 grow/shrink: 3/47 up/down: 194/-683 (-489)

> function                    old    new   delta

> find\_task\_by\_vpid           -    29   +29

> find\_vpid                   -    25   +25

> task\_tgid\_nr\_ns             -    22   +22

> task\_session\_nr\_ns           -    22   +22

> task\_pgrp\_nr\_ns             -    22   +22

> find\_task\_by\_pid            -    19   +19

> task\_pid\_nr\_ns              -    16   +16

> find\_task\_by\_pid\_ns           -    16   +16

> find\_pid                    -    15   +15

> proc\_task\_readdir           762   766   +4

> msg\_exit\_ns                 117   119   +2

> \_request\_firmware           688   690   +2

> nfs\_readpage\_truncate\_uninitialised\_page   298   297   -1

> sys\_swapoff                 1898   1896   -2

I see you have an interesting effect as well. Look, if you generate the .i file for mm/swapfile.c (the one where sys\_swapoff is) for

two cases - with and without this patch - you will see that the .i files differ in one place only - the find\_task\_xxx calls have transformed from macros into extern calls and (!) no places in this sys\_swapoff() use them.

The question is - WHY its size changed?  
Why gcc produces different code on the same input?

BTW, you're lucky - your sys\_swapoff shrank, but mine grew up just like yours msg\_exit\_ns() which has nothing to do with the functions changed :(

```
> set_get_cmap                332   330   -2
> __iovec_copy_from_user_inatomic      88   86   -2
> proc_pid_readdir            438   434   -4
> init_pit_clocksource         82    78   -4
> do_notify_parent_cldstop      297   293   -4
> do_notify_parent            394   390   -4
> kill_proc                   39    34   -5
> sys_timer_create            720   713   -7
> do_setlink                  796   789   -7
> debug_rt_mutex_print_deadlock        406  399   -7
> check_clock                 122   115   -7
> rest_init                   78    69   -9
> posix_cpu_clock_get          221   212   -9
> __set_special_pids           154   144  -10
> vma_adjust                   855   844  -11
> tty_ioctl                   3274  3263  -11
> kthreadd                    248   237  -11
> sys_kill                    313   301  -12
> sys_capget                   285   273  -12
> sys_getsid                   128   114  -14
> sys_getpgid                  128   114  -14
> posix_cpu_timer_create        240   226  -14
> kill_proc_info               45    31  -14
> find_get_pid                 31    16  -15
> sys_sched_getscheduler        92    76  -16
> sys_sched_getparam           143   127  -16
> sys_get_robust_list          149   133  -16
> sched_setaffinity            259   243  -16
> sched_getaffinity            114    98  -16
> ptrace_get_task_struct        90    74  -16
> futex_lock_pi               2435  2419  -16
> f_setown                     68    52  -16
> do_tkill                     280   264  -16
> do_sched_setscheduler         113    97  -16
> sys_sched_rr_get_interval     161   141  -20
> sys_capset                   702   681  -21
```

|                   |      |      |     |
|-------------------|------|------|-----|
| > eligible_child  | 215  | 191  | -24 |
| > do_task_stat    | 2135 | 2107 | -28 |
| > sys_setpriority | 446  | 416  | -30 |
| > sys_setpgid     | 419  | 389  | -30 |
| > sys_ioprio_set  | 471  | 441  | -30 |
| > sys_ioprio_get  | 388  | 358  | -30 |
| > sys_getpriority | 439  | 409  | -30 |
| > proc_pid_status | 1216 | 1186 | -30 |
| > do_wait         | 2677 | 2639 | -38 |
| >                 |      |      |     |

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