Subject: [PATCH 0/5] A config option to compile out some namespaces code
Posted by Pavel Emelianov on Wed, 26 Sep 2007 15:39:57 GMT
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There were some questions like "do I need this on my cellphone"
in reply to different namespaces patches. Indeed, the namespaces
are not useful for most of the embedded systems, but the code
creating and releasing them weights a lot.

So I propose to add a config option which will help embedded
people to reduce the vmlinux size. This option simply compiles
out the namespaces cloning and releasing code *only*, but keeps
all the other logic untouched (e.g. the notion of init_ns).

When someone tries to clone some namespace with their support
turned off, he will receive an EINVAL error.

This patchset can save more than 2KB from the vmlinux when
turning the config option "NAMESPACES" to "n":

$ scripts/bloat-o-meter vmlinux-no-ns vmlinux-with-ns
add/remove: 27/0 grow/shrink: 11/7 up/down: 2477/-340 (2137)

function	old	new	delta
copy_pid_ns	-	537	+537
copy_user_ns	-	181	+181
copy_ipcs	-	149	+149
zap_pid_ns_processes	-	130	+130
copy_utsname	-	120	+120
shm_exit_ns	-	106	+106
sem_exit_ns	-	106	+106
msg_exit_ns	-	106	+106
freeary	-	100	+100
release_uids	-	95	+95
freeque	-	92	+92
free_nsproxy	48	123	+75
create_new_namespaces	300	358	+58
free_pid_ns	-	56	+56
pid_namespaces_init	-	48	+48
__sem_init_ns	-	45	+45
shm_init_ns	-	42	+42
sem_init_ns	-	42	+42
msg_init_ns	-	42	+42
__shm_init_ns	-	38	+38
__msg_init_ns	-	31	+31
sysvipc_proc_release	5	35	+30
proc_kill_sb	5	35	+30
free_ipc_ns	-	30	+30
do_shm_rmid	-	29	+29

proc_set_super	13	38	+25
shm_release	18	39	+21
put_pid	75	95	+20
alloc_pid	687	706	+19
pid_caches_mutex	-	16	+16
free_user_ns	-	16	+16
sysvipc_proc_open	100	111	+11
do_shmat	778	787	+9
pid_caches_lh	-	8	+8
free_uts_ns	-	5	+5
pid_ns_cachep	-	4	+4
__initcall_pid_namespaces_init6	-	4	+4
do_exit	1855	1856	+1
show_stat	1665	1661	-4
sys_shmctl	1934	1907	-27
msg_init	82	47	-35
shm_init	92	47	-45
sem_init	99	44	-55
sys_msgctl	1394	1311	-83
sys_semctl	2123	2032	-91

This set was reviewed and approved by Serge, Cedric and Eric.

Signed-off-by: Pavel Emelyanov <xemul@openvz.org>

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