
Subject: Re: [PATCH 14/20] Allow cloning of new namespace
Posted by [Sukadev Bhattiprolu](#) on Tue, 07 Aug 2007 22:48:27 GMT
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Pavel Emelianov [xemul@openvz.org] wrote:

| When clone() is invoked with CLONE_NEWPID, create a new pid namespace
| and then create a new struct pid for the new process. Allocate pid_t's
| for the new process in the new pid namespace and all ancestor pid
| namespaces. Make the newly cloned process the session and process group
| leader.

| Since the active pid namespace is special and expected to be the first

active pid ns is the *last entry* in this patchset (not first) right ?

| entry in pid->upid_list, preserve the order of pid namespaces.

| The size of 'struct pid' is dependent on the the number of pid namespaces
| the process exists in, so we use multiple pid-caches'. Only one pid cache
| is created during system startup and this used by processes that exist
| only in init_pid_ns.

| When a process clones its pid namespace, we create additional pid caches
| as necessary and use the pid cache to allocate 'struct pids' for that depth.

| Note, that with this patch the newly created namespace won't work, since
| the rest of the kernel still uses global pids, but this is to be fixed
| soon. Init pid namespace still works.

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

| Signed-off-by: Sukadev Bhattiprolu <sukadev@us.ibm.com>

| ---

| include/linux/sched.h | 1
| kernel/fork.c | 48 ++++++-----
| kernel/nsproxy.c | 3 +
| kernel/pid.c | 91 ++++++-----
| 4 files changed, 118 insertions(+), 25 deletions(-)

| --- ./include/linux/sched.h.ve14 2007-08-06 15:00:09.000000000 +0400

| +++ ./include/linux/sched.h 2007-08-06 15:00:09.000000000 +0400

| @@ -27,6 +27,7 @@

| #define CLONE_NEWUTS 0x04000000 /* New utsname group? */

| #define CLONE_NEWIPC 0x08000000 /* New ipcns */

| #define CLONE_NEWUSER 0x10000000 /* New user namespace */

| +#define CLONE_NEWPID 0x20000000 /* New pids */

Nit. I think "New pid namespace" would be a better comment.

Suka
