
Subject: [RFC][PATCH 09/14] Save leaders struct pid before detach_pid()
Posted by [Sukadev Bhattiprolu](#) on Wed, 21 Mar 2007 03:21:03 GMT
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From: Sukadev Bhattiprolu <sukadev@us.ibm.com>
Subject: [RFC][PATCH 09/14] Save leaders struct pid before detach_pid()

Save the struct pid of the thread group leader before detaching
our pid. See comments in the code below for more details.

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

fs/exec.c | 17 ++++++++
1 file changed, 16 insertions(+), 1 deletion(-)

Index: lx26-21-rc3-mm2/fs/exec.c

```
=====
--- lx26-21-rc3-mm2.orig/fs/exec.c 2007-03-20 15:55:52.000000000 -0700
+++ lx26-21-rc3-mm2/fs/exec.c 2007-03-20 17:17:38.000000000 -0700
@@ -578,6 +578,7 @@ static int de_thread(struct task_struct
 struct sighand_struct *newsighand, *oldsighand = tsk->sighand;
 spinlock_t *lock = &oldsighand->siglock;
 struct task_struct *leader = NULL;
+ struct pid *leader_pid;
 int count;

/*
@@ -698,10 +699,24 @@ static int de_thread(struct task_struct
 * The old leader becomes a thread of the this thread group.
 * Note: The old leader also uses this pid until release_task
 * is called. Odd but simple and correct.
+ * Note: Support for multiple pid namespaces implies that there
+ * can be multiple processes with a given pid_t value,
+ * and so, find_pid() needs/uses a notion of "current"
+ * pid namespace to select the appropriate process to
+ * return.
+ *
+ * Since the current pid namespace of a process is stored
+ * in its pid->pid_nrs list, if we detach/free our struct
+ * pid, we would have no way of finding our current pid
+ * namespace and so no way of finding the leader pid.
+ *
+ * To work around, find the leader pid, before detaching
+ * our pid from the task.
 */
+ leader_pid = find_pid(leader->pid);
 detach_pid(tsk, PIDTYPE_PID);
 tsk->pid = leader->pid;
```

```
- attach_pid(tsk, PIDTYPE_PID, find_pid(tsk->pid));  
+ attach_pid(tsk, PIDTYPE_PID, leader_pid);  
  transfer_pid(leader, tsk, PIDTYPE_PGID);  
  transfer_pid(leader, tsk, PIDTYPE_SID);  
  list_replace_rcu(&leader->tasks, &tsk->tasks);
```

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