Subject: [PATCH 5/20] Prepare proc_flust_task() to flush entries from multiple proc trees
Posted by Pavel Emelianov on Tue, 07 Aug 2007 09:29:44 GMT
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```
 fs/proc/base.c          |   27 +++++++++++++++++++++++-------
 include/linux/proc_fs.h |    4 +++-
 kernel/exit.c           |    2 +-
 3 files changed, 24 insertions(+), 9 deletions(-)

--- ./fs/proc/base.c.ve5 2007-08-06 12:44:54.000000000 +0400
+++ ./fs/proc/base.c 2007-08-06 12:44:56.000000000 +0400
@@ -74,6 +74,7 @@
 #include <linux/nsproxy.h>
 #include <linux/oom.h>
 #include <linux/elf.h>
+#include <linux/pid_namespace.h>
 #include "internal.h"

 /* NOTE:
@@ -2115,27 +2116,27 @@ static const struct inode_operations pro
  *      that no dcache entries will exist at process exit time it
  *      just makes it very unlikely that any will persist.
  */
-void proc_flush_task(struct task_struct *task)
+static void proc_flush_task_mnt(struct vfsmount *mnt, pid_t pid, pid_t tgid)
 {
  struct dentry *dentry, *leader, *dir;
  char buf[PROC_NUMBUF];
  struct qstr name;

  name.name = buf;
- name.len = snprintf(buf, sizeof(buf), "%d", task->pid);
- dentry = d_hash_and_lookup(proc_mnt->mnt_root, &name);
+ name.len = snprintf(buf, sizeof(buf), "%d", pid);
+ dentry = d_hash_and_lookup(mnt->mnt_root, &name);
  if (dentry) {
   shrink_dcache_parent(dentry);
   d_drop(dentry);
   dput(dentry);
  }

- if (thread_group_leader(task))
+ if (tgid == 0)
```

```
   goto out;

  name.name = buf;
- name.len = snprintf(buf, sizeof(buf), "%d", task->tgid);
- leader = d_hash_and_lookup(proc_mnt->mnt_root, &name);
+ name.len = snprintf(buf, sizeof(buf), "%d", tgid);
+ leader = d_hash_and_lookup(mnt->mnt_root, &name);
  if (!leader)
   goto out;

@@ -2146,7 +2147,7 @@ void proc_flush_task(struct task_struct
   goto out_put_leader;

  name.name = buf;
- name.len = snprintf(buf, sizeof(buf), "%d", task->pid);
+ name.len = snprintf(buf, sizeof(buf), "%d", pid);
  dentry = d_hash_and_lookup(dir, &name);
  if (dentry) {
   shrink_dcache_parent(dentry);
@@ -2161,6 +2162,18 @@ out:
  return;
 }

+/*
+ * when flushing dentries from proc one need to flush them from global
+ * proc (proc_mnt) and from all the namespaces' procs this task was seen
+ * in. this call is supposed to make all this job.
+ */
+
+void proc_flush_task(struct task_struct *task)
+{
+ proc_flush_task_mnt(proc_mnt, task->pid,
+   thread_group_leader(task) ? 0 : task->tgid);
+}
+
 static struct dentry *proc_pid_instantiate(struct inode *dir,
        struct dentry * dentry,
        struct task_struct *task, const void *ptr)
--- ./include/linux/proc_fs.h.ve5 2007-08-06 12:44:54.000000000 +0400
+++ ./include/linux/proc_fs.h 2007-08-06 12:44:56.000000000 +0400
@@ -223,7 +223,9 @@ static inline void proc_net_remove(const
 #define proc_net_create(name, mode, info) ({ (void)(mode), NULL; })
 static inline void proc_net_remove(const char *name) {}

-static inline void proc_flush_task(struct task_struct *task) { }
+static inline void proc_flush_task(struct task_struct *task)
+{
+}
```

```
 static inline struct proc_dir_entry *create_proc_entry(const char *name,
  mode_t mode, struct proc_dir_entry *parent) { return NULL; }
--- ./kernel/exit.c.ve5 2007-08-06 12:44:56.000000000 +0400
+++ ./kernel/exit.c 2007-08-06 12:44:56.000000000 +0400
@@ -157,6 +157,7 @@ void release_task(struct task_struct * p
  int zap_leader;
 repeat:
  atomic_dec(&p->user->processes);
+ proc_flush_task(p);
  write_lock_irq(&tasklist_lock);
  ptrace_unlink(p);
  BUG_ON(!list_empty(&p->ptrace_list) || !list_empty(&p->ptrace_children));
@@ -184,7 +185,6 @@ repeat:
  }

  write_unlock_irq(&tasklist_lock);
- proc_flush_task(p);
  release_thread(p);
  call_rcu(&p->rcu, delayed_put_task_struct);
```