Subject: [PATCH 7/12]  allow proc_dir_entries to have destructor
Posted by Mishin Dmitry on Wed, 06 Dec 2006 22:27:41 GMT
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Destructor field added proc_dir_entries,
 standard destructor kfree'ing data introduced.

 Signed-off-by: Andrey Savochkin <saw@swsoft.com>

---
 fs/proc/generic.c       |   10 ++++++++--
 fs/proc/root.c          |    1 +
 include/linux/proc_fs.h |    4 ++++
 3 files changed, 13 insertions(+), 2 deletions(-)

--- linux-2.6.19-rc6-mm2.orig/fs/proc/generic.c
+++ linux-2.6.19-rc6-mm2/fs/proc/generic.c
@@ -608,6 +608,11 @@ static struct proc_dir_entry *proc_creat
  return ent;
 }

+void proc_data_destructor(struct proc_dir_entry *ent)
+{
+ kfree(ent->data);
+}
+
 struct proc_dir_entry *proc_symlink(const char *name,
   struct proc_dir_entry *parent, const char *dest)
 {
@@ -620,6 +625,7 @@ struct proc_dir_entry *proc_symlink(cons
   ent->data = kmalloc((ent->size=strlen(dest))+1, GFP_KERNEL);
   if (ent->data) {
    strcpy((char*)ent->data,dest);
+   ent->destructor = proc_data_destructor;
    if (proc_register(parent, ent) < 0) {
     kfree(ent->data);
     kfree(ent);
@@ -698,8 +704,8 @@ void free_proc_entry(struct proc_dir_ent

  release_inode_number(ino);

- if (S_ISLNK(de->mode) && de->data)
-  kfree(de->data);
+ if (de->destructor)
+  de->destructor(de);
  kfree(de);
 }

```
--- linux-2.6.19-rc6-mm2.orig/fs/proc/root.c
+++ linux-2.6.19-rc6-mm2/fs/proc/root.c
@@ -166,6 +166,7 @@ EXPORT_SYMBOL(proc_symlink);
 EXPORT_SYMBOL(proc_mkdir);
 EXPORT_SYMBOL(create_proc_entry);
 EXPORT_SYMBOL(remove_proc_entry);
+EXPORT_SYMBOL(proc_data_destructor);
 EXPORT_SYMBOL(proc_root);
 EXPORT_SYMBOL(proc_root_fs);
 EXPORT_SYMBOL(proc_net);
--- linux-2.6.19-rc6-mm2.orig/include/linux/proc_fs.h
+++ linux-2.6.19-rc6-mm2/include/linux/proc_fs.h
@@ -45,6 +45,8 @@ typedef int (read_proc_t)(char *page, ch
 typedef int (write_proc_t)(struct file *file, const char __user *buffer,
       unsigned long count, void *data);
 typedef int (get_info_t)(char *, char **, off_t, int);
+struct proc_dir_entry;
+typedef void (destroy_proc_t)(struct proc_dir_entry *);

 struct proc_dir_entry {
  unsigned int low_ino;
@@ -64,6 +66,7 @@ struct proc_dir_entry {
  read_proc_t *read_proc;
  write_proc_t *write_proc;
  atomic_t count;  /* use count */
+ destroy_proc_t *destructor;
  int deleted;  /* delete flag */
  void *set;
 };
@@ -108,6 +111,7 @@ char *task_mem(struct mm_struct *, char
 extern struct proc_dir_entry *create_proc_entry(const char *name, mode_t mode,
       struct proc_dir_entry *parent);
 extern void remove_proc_entry(const char *name, struct proc_dir_entry *parent);
+extern void proc_data_destructor(struct proc_dir_entry *);

 extern struct vfsmount *proc_mnt;
 extern int proc_fill_super(struct super_block *,void *,int);
```

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