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Subject: [PATCH 16/20] Create a slab-cache for 'struct pid\_namespace'  
Posted by [Pavel Emelianov](#) on Fri, 10 Aug 2007 11:48:22 GMT  
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This will help fixing memory leaks due to bad reference counting.

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Cc: Oleg Nesterov <oleg@tv-sign.ru>

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pid.c | 9 ++++++---

1 files changed, 6 insertions(+), 3 deletions(-)

--- ./kernel/pid.c.ve16 2007-08-07 12:50:16.000000000 +0400

+++ ./kernel/pid.c 2007-08-07 12:51:13.000000000 +0400

@ @ -34,6 +34,7 @ @

```
static struct hlist_head *pid_hash;
static int pidhash_shift;
struct pid init_struct_pid = INIT_STRUCT_PID;
+static struct kmem_cache *pid_ns_cachep;
```

```
int pid_max = PID_MAX_DEFAULT;
```

```
@ @ -480,7 +481,7 @ @ static struct pid_namespace *create_pid_
    struct pid_namespace *ns;
    int i;
```

```
- ns = kmalloc(sizeof(struct pid_namespace), GFP_KERNEL);
+ ns = kmem_cache_alloc(pid_ns_cachep, GFP_KERNEL);
    if (ns == NULL)
        goto out;
```

```
@ @ -510,7 +511,7 @ @ static struct pid_namespace *create_pid_
    out_free_map:
    kfree(ns->pidmap[0].page);
    out_free:
- kfree(ns);
+ kmem_cache_free(pid_ns_cachep, ns);
    out:
    return ERR_PTR(-ENOMEM);
}
```

```
@ @ -521,7 +522,7 @ @ static void destroy_pid_namespace(struct
```

```
    for (i = 0; i < PIDMAP_ENTRIES; i++)
        kfree(ns->pidmap[i].page);
```

```

- kfree(ns);
+ kmem_cache_free(pid_ns_cachep, ns);
}

struct pid_namespace *copy_pid_ns(unsigned long flags, struct pid_namespace *old_ns)
@@ -595,4 +596,6 @@ void __init pidmap_init(void)
    init_pid_ns.pid_cachep = create_pid_cachep(1);
    if (init_pid_ns.pid_cachep == NULL)
        panic("Can't create pid_1 cachep\n");
+
+ pid_ns_cachep = KMEM_CACHE(pid_namespace, SLAB_PANIC);
}

```

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