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Subject: [PATCH 8/12] pid: Replace is\_orphaned\_pgrp with is\_current\_pgrp\_orphaned

Posted by [ebiederm](#) on Wed, 13 Dec 2006 11:07:52 GMT

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Every call to is\_orphaned\_pgrp passed in process\_group(current) which is racy with respect to another thread changing our process group. It didn't bite us because we were dealing with integers and the worse we would get would be a stale answer.

In switching the checks to use struct pid to be a little more efficient and prepare the way for pid namespaces this race became apparent.

So I simplified the calls to the more specialized is\_current\_pgrp\_orphaned so I didn't have to worry about making logic changes to avoid the race.

Signed-off-by: Eric W. Biederman <[ebiederm@xmission.com](mailto:ebiederm@xmission.com)>

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```
drivers/char/n_tty.c | 2 +-
drivers/char/tty_io.c | 2 +-
include/linux/tty.h | 2 +-
kernel/exit.c      | 4 +++-
kernel/signal.c    | 2 +-
5 files changed, 6 insertions(+), 6 deletions(-)
```

```
diff --git a/drivers/char/n_tty.c b/drivers/char/n_tty.c
```

```
index e96a00f..7f1ded8 100644
```

```
--- a/drivers/char/n_tty.c
```

```
+++ b/drivers/char/n_tty.c
```

```
@@ -1189,7 +1189,7 @@ static int job_control(struct tty_struct *tty, struct file *file)
```

```
    printk("read_chan: tty->pgrp <= 0!\n");
    else if (process_group(current) != tty->pgrp) {
        if (is_ignored(SIGTTIN) ||
-       is_orphaned_pgrp(process_group(current)))
+       is_current_pgrp_orphaned())
```

```
        return -EIO;
        kill_pg(process_group(current), SIGTTIN, 1);
        return -ERESTARTSYS;
```

```
diff --git a/drivers/char/tty_io.c b/drivers/char/tty_io.c
```

```
index 74f078a..d8fdf45 100644
```

```
--- a/drivers/char/tty_io.c
```

```
+++ b/drivers/char/tty_io.c
```

```
@@ -1118,7 +1118,7 @@ int tty_check_change(struct tty_struct * tty)
```

```
    return 0;
    if (is_ignored(SIGTTOU))
        return 0;
- if (is_orphaned_pgrp(process_group(current)))
```

```

+ if (is_current_pgrp_orphaned())
    return -EIO;
    (void) kill_pg(process_group(current), SIGTTOU, 1);
    return -ERESTARTSYS;
diff --git a/include/linux/tty.h b/include/linux/tty.h
index 1185bca..13a4918 100644
--- a/include/linux/tty.h
+++ b/include/linux/tty.h
@@ -283,7 +283,7 @@ extern int tty_read_raw_data(struct tty_struct *tty, unsigned char *bufp,
    int buflen);
extern void tty_write_message(struct tty_struct *tty, char *msg);

-extern int is_orphaned_pgrp(int pgrp);
+extern int is_current_pgrp_orphaned(void);
extern int is_ignored(int sig);
extern int tty_signal(int sig, struct tty_struct *tty);
extern void tty_hangup(struct tty_struct * tty);
diff --git a/kernel/exit.c b/kernel/exit.c
index 5f8455e..610917d 100644
--- a/kernel/exit.c
+++ b/kernel/exit.c
@@ -229,12 +229,12 @@ static int will_become_orphaned_pgrp(struct pid *pgrp, struct
task_struct *ignor
    return ret; /* (sighing) "Often!" */
}

-int is_orphaned_pgrp(int pgrp)
+int is_current_pgrp_orphaned(void)
{
    int retval;

    read_lock(&tasklist_lock);
- retval = will_become_orphaned_pgrp(find_pid(pgrp), NULL);
+ retval = will_become_orphaned_pgrp(task_pgrp(current), NULL);
    read_unlock(&tasklist_lock);

    return retval;
diff --git a/kernel/signal.c b/kernel/signal.c
index 1e34d32..91caafa 100644
--- a/kernel/signal.c
+++ b/kernel/signal.c
@@ -1908,7 +1908,7 @@ relock:

    /* signals can be posted during this window */

- if (is_orphaned_pgrp(process_group(current)))
+ if (is_current_pgrp_orphaned())
    goto relock;

```

```
spin_lock_irq(&current->sigband->siglock);
```

```
--
```

```
1.4.4.1.g278f
```

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Containers@lists.osdl.org

<https://lists.osdl.org/mailman/listinfo/containers>

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