
Subject: Re: utrace, RCU and ia64

Posted by [Alexey Dobriyan](#) on Tue, 17 Apr 2007 11:12:55 GMT

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[double freeing of struct utrace leading to oops in
__rcu_process_callbacks]

Hi, Roland,

utrace debugging you've put into 2.6.21-rc6-mm1 helped. Two double-frees reproduced:

1) BUG at kernel/utrace.c:176

```
rcu_utrace_free
utrace_reap
utrace_release_task
release_task
flush_old_exec
load_elf_binary
search_binary_handler
do_execve
```

2) rcu_utrace_free
check_dead_utrace
remove_detached
finish_report_death
utrace_report_death
do_exit
debug_mutex_init
get_signal_to_deliver
do_notify_resume
ptregscall_common
sysret_signal

I've sprinkled more atomic_set's over utrace code to determine who is at fault of first freeing. It seems to be

```
rcu_utrace_free
check_dead_utrace
wake_quiscent
utrace_detach
```

It was atomic_set(&utrace->debug, 42) right before wake_quiscent() call and printk() in rcu_utrace_free() call. So it was 42 or garbage.

How I understand all this is that check_dead_utrace() can free struct utrace, and don't clear ->utrace pointer.
