

# VT\_WAITACTIVE leads to unkillable processes

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*Source:* <http://unix.derkeiler.com/Mailing-Lists/FreeBSD/current/2007-08/msg00809.html>

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flz and I are working on a port of ConsoleKit to FreeBSD. ConsoleKit is a framework for tracking local users (i.e. users sitting at a machine) and their sessions.

Since it tracks local users and their consoles, it makes generous use of consio. One of the things it does is get a list of the total number of available consoles (i.e. vtys) and starts a thread for each one to check when the console becomes active. To do this, each thread invokes the VT\_WAITACTIVE ioctl, and sits in waitvt until its vty becomes active. This works quite well.

Where things break down is when the ConsoleKit daemon is stopped. When the daemon receives a signal, it immediately jumps to 100% of the CPU and claims to be in waitvt. It will not die unless you reboot the machine, or get lucky with the debugger.

Below is a link to a small sample program that will reproduce this behavior. Simply compile the program, and run it from a vty other than 3 (ttyv2). Then try a control+C, and the problem will appear instantly.

I've been testing 7.0-CURRENT #104: Thu Aug 16 16:54:28 EDT 2007 with ULE, but I have a report from flz that the same loop is observed on -STABLE with 4BSD. When I ran the test on -STABLE, my box immediately panicked, but I did not have dumps setup.

Yes, this is a, "doctor it hurts when I do this" kind of thing; however, since this does not happen on Linux, I'm wondering if the kernel portion of the VT\_WAITACTIVE ioctl can be modified not to cause this tight loop (or panic)?

WARNING: This running this program will either cause instance on mostly unstopable CPU load on your machine or panic it.

<http://www.marcuscom.com/downloads/vty.c>

```
gcc -o vty vty.c
(switch to ttyv0)
./vty
```

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Joe

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