## Subject: Interrupted System Calls reading from NFS on Sun Solaris Posted by sitongia on Mon, 27 Jun 1994 19:16:45 GMT

View Forum Message <> Reply to Message

I haven't gotten anywhere with Sun or RSI on this one yet, so I'm wondering if anyone else has seen this and has some insights. A program running under IDL on a Sun running Solaris 2.3 will read data from another Sun over NFS and barf about an "Interrupted system call". Moments later, run again, it works fine.

IDL> filtcal

% OPENR: Error opening file: /swing/d/lites/invert/op07\_std/a\_\_\_header. Interrupted system call

% Execution halted at READ\_FLOATS </home/hao/stokes/src/idl/read\_floats.pro(34)> (OPENR).

% Called from B\_IMAGE\_STR </home/hao/stokes/src/idl/b\_image.pro(74)>.

% Called from B\_IMAGE </home/hao/stokes/src/idl/b\_image.pro(205)>.

% Called from C\_IMAGE\_STR </home/hao/stokes/src/idl/c\_image.pro(62)>.

% Called from C\_IMAGE </home/hao/stokes/src/idl/c\_image.pro(239)>.

% Called from FILTCAL <azcal.pro( 262)>.

% Called from \$MAIN\$.

IDL> filtcal

lightness.pal

IDL>

Anyone else seen this sort of thing before? I've applied plenty of patches, and this problem isn't in the Sun bugs database. Could it be caused by a hardware problem?

Thanks, Leonard

---

--Leonard E. Sitongia sitongia@ncar.ucar.edu High Altitude Observatory HAO Sun Unix System Manager

voice: (303)497-1509 fax: (303)497-1589 P.O. Box 3000 Boulder CO 80307 USA

Subject: Re: Interrupted System Calls reading from NFS on Sun Solaris Posted by caron on Thu, 30 Jun 1994 16:32:13 GMT View Forum Message <> Reply to Message

I know that interrupted system calls in UNIX are a normal occurence. The correct thing to do is (almost always) to simply re-issue the call. (See Leffler et al, p 47-48). What is surprising is that this behavior is seen at this high of an API. Typically you are using some library routine that takes care of it (e.g. fread()). What is READ\_FLOATS actually calling? If it is calling an i/o routine that does not handle return EINTR, (read()?)

then I would guess that the correct solution is that READ\_FLOATS should handle it (by looking for it and then reissuing read), and not allow it to propagate up.

I am not sure on the details of how NFS works, but EINTR is gotten when the system issues a system call that may take a long time to complete (eg I/O) and a signal comes along that must be serviced. I think that "saving the state" of the system call is too hard, so after servicing the signal, the OS just returns from the system call with EINTR, more or less telling the calling routine to "try again". Probably theres lots more subtleties, but I think thats the vanilla explanation.

Subject: Re: Interrupted System Calls reading from NF Posted by sitongia on Thu, 30 Jun 1994 17:56:14 GMT View Forum Message <> Reply to Message

In article ar9@ncar.ucar.edu, caron@acd.ucar.edu (John Caron) writes:

- > I know that interrupted system calls in UNIX are a normal occurence. The
- > correct thing to do is (almost always) to simply re-issue the call.
- > (See Leffler et al, p 47-48). What is surprising is that this behavior
- > is seen at this high of an API. Typically you are using some library routine
- > that takes care of it (e.g. fread()). What is READ\_FLOATS actually calling?
- > If it is calling an i/o routine that does not handle return EINTR, (read()?)
- > then I would guess that the correct solution is that READ\_FLOATS should
- > handle it (by looking for it and then reissuing read), and not
- > allow it to propagate up.

Thank you for your explanation. READ\_FLOATS is calling READU. Perhaps there's a way to do error handling and retry the read in READ\_FLOATS. At this point we've been running successfully for a short time since I've removed the "intr" mount option. The filesystem is automounted hard,fg, without intr. Next I'll try mounting background to avoid clients hanging, of course.

\_\_.

--Leonard E. Sitongia sitongia@ncar.ucar.edu High Altitude Observatory HAO Sun Unix System Manager voice: (303)497-1509 fax: (303)497-1589 P.O. Box 3000 Boulder CO 80307 USA