
Subject: SunOS 4.1.1 bug causes disk write failures in IDL/PV-WAVE -- solution
Posted by [joanne](#) on Tue, 16 Jul 1991 22:28:08 GMT

[View Forum Message](#) <> [Reply to Message](#)

This message is a followup to an article posted by Ali Bahrami (ali@cs.colorado.edu) on 4/15/91. He discusses a SunOS 4.1.1 bug that affects IDL (and PV-WAVE) when run under X Windows, together with an "unofficial" solution to the problem from Sun. Sun has since released an official kernel patch that appears to solve the problem.

Our system is a 4/470 running PV-WAVE 3.02. The problem appeared when writing large (greater than about 1 MB) files to disk. A typical error message was

```
% WRITEU: Error encountered writing to file. Unit: 102
  File: /data2/images/1178415.tmp
  Interrupted system call
% Execution halted at .... (rest deleted)
```

From ali@cs.colorado.edu's article, a more specific description of the problem:

- > A bug in SunOS 4.1.1 can cause transfers of data from IDL to a
- > disk file to fail. The relevant Sun Microsystems bug report,
- > as retrieved from their Online Bugs Database is as follows:
- >
- > Reference Number: 1052649
- > Synopsis: write system call is returning EINTR
- >
- > Category: kernel
- > Subcategory: ufs
- > Releases: 4.1.1
- >
- > Hardware: sun4c_60
- >
- > Description:
- > Customer's programs behave differently on 4.1.1 than
- > on 4.1. For example, a customer had a program that
- > first sets up a signal handler for the SIGALRM signal,
- > then sets up the ITIMER_REAL alarm to be posted.
- > The program then goes into a loop writing data out
- > to a file. On 4.1 the kernel restarts the write(2)
- > call. On 4.1.1, the kernel returns EINTR.
- > WORK AROUND:
- > Set ufs_WRITES to 0 with adb.
- >
- > Since the problem is in the operating system kernel, it will not
- > help to use earlier versions of IDL. Other programs may also exhibit

- > the problem. Despite the Sun bug report, we believe the bug
- > exists on all systems running SunOS 4.1.1, and not just the
- > SparcStation 1 (sun4c_60). Here are the known options for dealing
- > with this situation:

(Instructions on how to use adb to patch your kernel deleted)

If you are under Sun software maintenance, you can request patch 100293-01. I applied it to our system last night, and it appears to have fixed the problem. I have also reported this solution to Precision Visuals.

If you are unable to get the patch, one workaround might be to write your file to disk in small sections and call "wait" between each call to "writeu." This technique isn't foolproof, but I was able to use it to write my 2.3 MB files in pieces of 150 KB with 2 seconds between each write. Ugly, but it worked.

> -----
> Ali Bahrami | (303) 786-9900 voice
> Research Systems, Inc. | (303) 786-9909 fax
> 777 29th St., Suite 302 | idl@boulder.colorado.edu internet
> Boulder, CO 80303 | idl@cololasp bitnet
orion::idl span

--

Joanne Shimada (Internet: joanne@malibu.jpl.nasa.gov; SPAN: kahuna::joanne)
Jet Propulsion Laboratory, M/S 300-235, 4800 Oak Grove Drive, Pasadena, CA 91109
Disclaimer: The views expressed herein are mine only and do not represent
those of the Jet Propulsion Laboratory.
