Subject: Re: IDL 5.3 Performance ?
Posted by John-David T. Smith on Wed, 09 Feb 2000 08:00:00 GMT
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Richard Tyc wrote:

> Q. for JD Smith: is the is2_53.sav test program alot different than the
> version for IDL 5.2 ?
>

This is exactly the same program, just "recompiled" for 5.3. It is very basic, and does little more than a bunch of housekeeping and stuff to auto-email the results. The actual testing is being done with:

time_test3,/NOFILEIO

graphics_times3

and the extracted IO test from time_test3. When I compare time_test.pro from IDL5.3 to IDL5.2.1, the *only* differences are the addition of the new compiler directives:

COMPILE_OPT hidden

to hide the compilation. The file time_test3.pro differs only in the version number listed at the top (1.1 vs. 1.1.2.1), but otherwise has *no* differences. The story is the same with graphics_times*.pro.

I rechecked the excerpted IO test, and it still checks out.

> Any comments/ideas ?

The limited 5.3 testing I've done does indicate a slowdown, although these tests were confined to a few machines only. For instance, on the chart on the IDLSpecII page, you can see I've entered my machine (Dell Dimension 400Mhz PII) twice, and the IO was hardest hit (by far). To really see what the slow down is, or if it is general, we need people to recontribute 5.3 idlspec2 entries from machines they had sent in before, making sure to use exactly the same descriptions and text so that i can sort those out together. Just take a look at http://www.astro.cornell.edu/idlspec/is2_sorted.html to find your old entry.

In the interest of a little more certainty, I did a side by side time_test3 with v5.2.1 and v5.3. I got:

	5.2.1		5.3
1	0.21400	1	0.20214

2	0.23642	2	0.23430
3	0.25929	3	0.26889
4	0.24083	4	0.25496
5	0.14772	5	0.19550
6	1.0328	6	1.0214
7	0.50235	7	0.50162
8	0.46114	8	0.46131
9	0.44494	9	0.44587
10	0.87304	10	0.87744
11	0.67848	11	0.67851
12	0.33605	12	0.24401
13	0.40520	13	0.21952
14	0.27451	14	0.085009
15	0.26790	15	0.25382
16	0.36092	16	0.41647
17	1.4182	17	1.4306
18	0.27534	18	0.26124
19	0.45899	19	0.46114
20	0.46100	20	0.45048
21	0.32254	21	0.32184
22	0.13546	22	0.13159
23	0.90981	23	0.91101
10.7171=Total		10.3288=Total	

So this doesn't really support a slowdown. Test 5 "Mult 512 by 512 byte by constant and store, 30 times", is marginally slower. But tests 12,13, and especially 14 (LU decomposition) are faster. Even I/O seems similar, which probably means I was comparing apples and oranges, since my original result (around .45 seconds) was obtained using a different version of Linux and the C libraries (I was forced to upgrade in order to use 5.3). When compared side by side in this way, results really are quite similar. The geometric means were 0.35871513 (v5.3) and 0.38800894 (v5.2.1), indicating the *slight* speedup of 5.3 on specific tests, most notably LU decomp.

IDLSpecMark's were 0.873758 (v5.3) versus 0.891246 (v5.2.1), but had a good deal of variability on subsequent invocations, and were certainly consistent with similar performance. My suggestion is to look to the operating system, or try installing 5.2.1 on your new machine and comparing that way.

JD

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J.D. Smith |*| WORK: (607) 255-5842
Cornell University Dept. of Astronomy |*| (607) 255-6263
304 Space Sciences Bldg. |*| FAX: (607) 255-5875
Ithaca, NY 14853 |*|