Subject: Slow Linking under Linux
Posted by residue on Sun, 10 Sep 2006 10:41:51 GMT
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Hi,

i'm running U++ (TheIDE) under Fedora Core 5. Linking the programm is very slow.

compile-time: 2699 msecs
linking-time: 0.59.44

is there a way to speedup linking?

gcc: 4.1.1 20060525 (Red Hat 4.1.1-1)
ld: GNU ld version 2.16.91.0.6 20060212

with best regards
peter

Subject: Re: Slow Linking under Linux
Posted by mirek on Sun, 10 Sep 2006 12:08:22 GMT
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Well, while linking in linux is slower, one minute is quite a lot.

Possible solution is to compile in debug mode as SO (packages are compiled into shared libraries). It is however possible that in current dev version shared mode is brokem.

Mirek

Subject: Re: Slow Linking under Linux
Posted by residue on Sun, 10 Sep 2006 18:27:42 GMT
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I've tried SHARED Mode, but it is not really faster. It saved 6 seconds.

I'm using U++ 605 on a Intel(R) Pentium(R) 4 CPU 2.60GHz with a SATA Harddisk.

with best regards
peter

Subject: Re: Slow Linking under Linux
Posted by mirek on Sun, 10 Sep 2006 19:02:15 GMT

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That is quite strange. I will checks my link times ASAP and report.

BTW, it is "SO" ("All shared") mode, not "SHARED" ("Use shared libs").

If you are building with debug info, I think you should be able to reduce link times by deactivating debug info for individual packages (again, in Output mode).

Another thing to check is whether your SATA drive works at full speed (possible driver problem?).

Mirek

Subject: Re: Slow Linking under Linux
Posted by residue on Sun, 10 Sep 2006 19:57:42 GMT

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I did the test with "SO" ("All shared").

Here some performance from the SATA drive.

writing:
100240000 Bytes (100 MB) kopiert, 0,506279 Sekunden, 198 MB/s
1002400000 Bytes (1,0 GB) kopiert, 29,8953 Sekunden, 33,5 MB/s

reading:
Timing buffered disk reads: 150 MB in 3.07 seconds = 48.94 MB/sec

I don't think there is a problem on the system. Other projects (non U++) linking within some seconds (less then 10 secs).

with best regards
peter

Subject: Re: Slow Linking under Linux
Posted by mirek on Mon, 11 Sep 2006 12:08:26 GMT

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Well, I have just checked with my UBuntu; full rebuild of examples/UWord:

[code]
Linking...
/home/cxl/out/GCC32.Debug_full.Gui.Shared/UWord (12058847 B) linked in (0:02.42)

OK. (1:04.48)
[/quote]

I consider that quite acceptable...

gcc (GCC) 4.0.3 (Ubuntu 4.0.3-1ubuntu5)
GNU ld version 2.16.91 20060118 Debian GNU/Linux

Machine is AMD64@2.4Ghz, 1GB RAM

Mirek

Subject: Re: Slow Linking under Linux
Posted by residue on Mon, 11 Sep 2006 20:17:49 GMT
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Hi,

OK, it seems to be a bug within ld and debugging symbols.

 http://www.mail-archive.com/bug-binutils@gnu.org/msg02052.ht ml

thanks for your support.

with best regards
peter

Subject: Re: Slow Linking under Linux
Posted by mirek on Mon, 11 Sep 2006 21:30:44 GMT
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Great to know that it is bug of somebody else this time

Mirek

Subject: Re: Slow Linking under Linux
Posted by mirek on Sun, 19 Nov 2006 22:57:07 GMT
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Is there any solution to this?

I have made mistake upgrading to latest ubuntu and at that moment, I got a new ld with it... and slow linking.

Well, I have found that you can speedup it significantly by avoiding debug info, but that is not solution.

Mirek

Subject: Re: Slow Linking under Linux
Posted by zsolt on Sun, 19 Nov 2006 23:30:45 GMT
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By bugzilla, it is resolved in Linux binutils 2.17.50.0.5.
http://sourceware.org/bugzilla/show_bug.cgi?id=3111