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Subject: Linux compile fails

Posted by [iplayfast](#) on Fri, 24 Feb 2006 09:19:50 GMT

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After editing the Makefile to give names (as mentioned in the readme) it compiled everything but then died on the final link.

It was trying to write the output to /src/ide I believe. (no such directory on my system).

I changed it to bin/Theide and let er rip.

It then came back with

```
/usr/lib/gcc/i686-pc-linux-gnu/3.4.5/../../../../i686-pc-linux-gnu/bin/ld:
./bin/ide/GCC32-Gcc-Gui-Linux-Main-Shared/SelectPkg.o(.gnu.linkonce.r._ZTV14CallbackAction+
0x8): unresolvable relocation against symbol `__cxa_pure_virtual@@CXXABI_1.3'
/usr/lib/gcc/i686-pc-linux-gnu/3.4.5/../../../../i686-pc-linux-gnu/bin/ld: final link failed:
Nonrepresentable section on output
collect2: ld returned 1 exit status
distcc[23448] ERROR: compile (null) on localhost failed
make: *** [bin/Theide] Error 1
```

I'm not sure what to do with that.

I'm compiling using Linux

```
gcc -v
```

```
Reading specs from /usr/lib/gcc/i686-pc-linux-gnu/3.4.5/specs
```

```
Configured with: /var/tmp/portage/gcc-3.4.5/work/gcc-3.4.5/configure --prefix=/usr
```

```
--bindir=/usr/i686-pc-linux-gnu/gcc-bin/3.4.5
```

```
--includedir=/usr/lib/gcc/i686-pc-linux-gnu/3.4.5/include
```

```
--datadir=/usr/share/gcc-data/i686-pc-linux-gnu/3.4.5
```

```
--mandir=/usr/share/gcc-data/i686-pc-linux-gnu/3.4.5/man
```

```
--infodir=/usr/share/gcc-data/i686-pc-linux-gnu/3.4.5/info
```

```
--with-gxx-include-dir=/usr/lib/gcc/i686-pc-linux-gnu/3.4.5/include/g++-v3 --host=i686-pc-linux-gnu
```

```
--build=i686-pc-linux-gnu --disable-altivec --enable-nls --without-included-gettext --with-system-zlib
```

```
--disable-checking --disable-werror --disable-libunwind-exceptions --disable-multilib
```

```
--disable-libmudflap --disable-libgcj --enable-languages=c,c++,f77 --enable-shared
```

```
--enable-threads=posix --enable-__cxa_atexit --enable-clocale=gnu
```

```
Thread model: posix
```

```
gcc version 3.4.5 (Gentoo 3.4.5, ssp-3.4.5-1.0, pie-8.7.9)
```

---

Subject: Re: Linux compile fails

Posted by [mirek](#) on Fri, 24 Feb 2006 09:50:04 GMT

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---

Please, try to remove

-ffunction-sections

from the

CC = c++ -c -O2 -Os -ffunction-sections

line.

Mirek

P.S.: I am sorry for linux troubles - we are seeking for capable Linux maintainer/releaser for years now...

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Subject: Re: Linux compile fails

Posted by [iplayfast](#) on Fri, 24 Feb 2006 10:01:24 GMT

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---

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CC = c++ -c -O2 -Os -ffunction-sections

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I've not seen -ffunction-sections before. What does it do?

As far as Linux I might be able to give you a hand. Let me get more familiar with your system first though. After I get this up and running I'm going to try to make a autoconf make system for it. (If nothing else it will refresh my skills).

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Subject: Re: Linux compile fails

Posted by [mirek](#) on Fri, 24 Feb 2006 10:31:21 GMT

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iplyfast wrote on Fri, 24 February 2006 05:01luzr wrote on Fri, 24 February 2006 04:50Please, try to remove

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P.S.: I am sorry for linux troubles - we are seeking for capable Linux maintainer/releaser for years now...

I've not seen -ffunction-sections before. What does it do?

As far as Linux I might be able to give you a hand. Let me get more familiar with your system first though. After I get this up and running I'm going to try to make a autoconf make system for it. (If nothing else it will refresh my skills).

Well, -ffunction-sections is a flag for compiler that puts each function into separate section. This makes dead-code removal possible for the linker.

However, it unfortunately turns out that "ld" does not do removal anyway, and some ld versions react with the error message you have encountered (meanwhile, our own MinGW ld replacement "uld" is able to use this).

I have already encountered the error in ubuntu a "-ffunction-sections" is now removed from TheIDE GCC builder in Linux, but it looks like it somehow survived in makefile generator...

When thinking about autoconf etc, please keep always keep in mind the "synthetic" nature of Makefile. OTOH, if something is needed to be added to Makefile generator, we will be happy to do so.

Also, the whole linux distribution structure is open to discussion. What we have now is what we were able to put together with our limited resources...

Mirek

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Subject: Re: Linux compile fails  
Posted by [iplyfast](#) on Fri, 24 Feb 2006 16:57:54 GMT

the -ffunction-sections remove made no difference.

```
/usr/lib/gcc/i686-pc-linux-gnu/3.4.5/../../../../i686-pc-linux-gnu/bin/ld:
./bin/ide/GCC32-Gcc-Gui-Linux-Main-Shared/SelectPkg.o(.gnu.linkonce.r._ZTV14CallbackAction+
0x8): unresolvable relocation against symbol `__cxa_pure_virtual@@CXXABI_1.3'
/usr/lib/gcc/i686-pc-linux-gnu/3.4.5/../../../../i686-pc-linux-gnu/bin/ld: final link failed:
Nonrepresentable section on output
collect2: ld returned 1 exit status
distcc[11168] ERROR: compile (null) on localhost failed
make: *** [bin/Theide] Error 1
```

although it appears to be a problem with linking against my library.

I'll play with it a bit and see what I can come up with.

As far as something added to the Makefile generator, how about clean?

I use gentoo so I rarely deal with rpm's or any of that other stuff. I always compile from source. I'll see how this goes before I commit. (I have a bad habit of not finishing things that I start, and I don't want to make a false promise).

---

**Subject: Re: Linux compile fails**  
Posted by [mirek](#) on Fri, 24 Feb 2006 17:12:46 GMT  
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iplyfast wrote on Fri, 24 February 2006 11:57the -ffunction-sections remove made no difference.

```
/usr/lib/gcc/i686-pc-linux-gnu/3.4.5/../../../../i686-pc-linux-gnu/bin/ld:
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I use gentoo so I rarely deal with rpm's or any of that other stuff. I always compile from source. I'll see how this goes before I commit. (I have a bad habit of not finishing things that I start, and I don't want to make a false promise).

I have to apologize, while checking the Makefile generation, I have encountered another sections related option, this time for the linker:

```
--gc-sections
```

I have already removed that from the Makefile generator, please whether it helps for gentoo...

Mirek

---

Subject: Re: Linux compile fails  
Posted by [iplayfast](#) on Fri, 24 Feb 2006 18:00:13 GMT  
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---

Yes that got it.

Now it starts and asks for creating user copies of various things. When I click ok it says upp directory not found. It doesn't seem to matter where I start the program.

Normally you would do something like  
make  
sudo make install

which would install the files in the appropriate place in the Linux system.

Ok I see my mistake. Reading the readme helps

It looks like I've got a working system.

I'm going to work on an autoconf scheme to do what you've done so it will

1. Use the local compile flags (Your flags looked pretty generic so I assume this is ok, let me know if it's not).
2. Be easily maintained. (This usually is just a matter of adding new files to configure.in)
3. Automagically install stuff
4. Make an ebuild for gentoo so you will have all the Gentoo Linux users using your software. (Ok, probably just some of them)

Let me know if there are any problems with what I propose, if not I'll work on it over the weekend.

---

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Subject: Re: Linux compile fails

Posted by [mirek](#) on Fri, 24 Feb 2006 18:07:27 GMT

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iplyfast wrote on Fri, 24 February 2006 13:00

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I'm going to work on an autoconf scheme to do what you've done so it will

1. Use the local compile flags (Your flags looked pretty generic so I assume this is ok, let me know if it's not).
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4. Make an ebuild for gentoo so you will have all the Gentoo Linux users using your software. (Ok, probably just some of them)

Let me know if there are any problems with what I propose, if not I'll work on it over the weekend.

Well, you must be all the time aware of one thing: Makefiles are NOT used during development process, they are supplied just as last moment fix.

That mostly means that manual maintainace of source files list is not an option. If there is some other file than Makefile needed to be mainained, we should rather add new feature into TheIDE.

Frankly, avoiding makefiles was one of design goals

Mirek

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Subject: Re: Linux compile fails

Posted by [iplyfast](#) on Fri, 24 Feb 2006 18:28:04 GMT

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---

I can see that avoiding makefiles was a design goal. However if you want this system to be used, ya gotta have it for the initial build.

BTW, why? Make is a good thing. It speeds up the build by not rebuilding things that are not out of date, it can be used across multiple processors and computers (check out distcc) and is a very fast process. You guys are doing some amazing work, but this to me looks like re-inventing the wheel.

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Subject: Re: Linux compile fails

Posted by [zsolt](#) on Fri, 24 Feb 2006 19:33:54 GMT

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Quote:but this to me looks like re-inventing the wheel.

Try using TheIDE for one or two weeks for professional development.

And after it switch back to your conventional environment with make.

---

You will find that conventional model unusably slow.  
Using U++'s build environment is viero addictive  
I started using upp about 2 monts ago, but I can not imagine going back to make or scon world.

---

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Subject: Re: Linux compile fails  
Posted by [zso1t](#) on Fri, 24 Feb 2006 19:38:14 GMT  
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read this topic:  
How BLITZ works?  
<http://www.arilect.com/upp/forum/index.php?t=msg&th=214& amp; amp;start=0&>

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Subject: Re: Linux compile fails  
Posted by [unodgs](#) on Fri, 24 Feb 2006 20:31:48 GMT  
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zso1t wrote on Fri, 24 February 2006 14:33Quote:but this to me looks like re-inventing the wheel.  
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You will find that conventional model unusably slow.  
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I wouldn't say that better!

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Subject: Re: Linux compile fails  
Posted by [iplayfast](#) on Fri, 24 Feb 2006 20:34:34 GMT  
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Thanks that was helpful. I kept seeing blitz and assumed it was blitz++ which although cool, seemed like overkill. (Blitz++ is a high performance math library).

As far as blitz being faster, so far I've not seen that. It appears to recompile the world for any change at all.  
For example in the sdl example <http://www.arilect.com/upp/forum/index.php?t=msg&th=339& amp;start=0&S=5a7812b809c46c7d841b43292b2ab0c8>  
I changed include <SDL.h> to <SDL/SDL.h> and it recompiled not only the example but the (I guess) blitz file as well.

In the scribble example it compiles 9 sets of files. The sets include CtrlLib, CtrlCore, RichText and all these other libraries. Why is it doing that?

Maybe this is a Linux Windows difference. It seems much more responsive on Windows then

Linux.

Also not to be argumentative, but this functionality is already present in Linux. It's made up of several tools.

make depend figures out what files depend on what  
ccache will cache compiles that have been previously done  
gcc will compile several files at a time  
make will compile using several processors or computers at a time, and will only compile files that have changed.

What Ultimate has done is very neat, and useful, but on Linux it is redundant. (But I'm glad to see it in Windows!)

---

Subject: Re: Linux compile fails  
Posted by [mirek](#) on Fri, 24 Feb 2006 20:48:30 GMT  
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Well, BLITZ is very different system. Please read the explanation again:) OTOH, BLITZ needs to know more about what he compiles than makefiles are able to provide (it is C++ specific, goes through files, checks things and even generates some stub C++ code).

For full debug mode rebuild, BLITZ can be as much as 4 times faster .

The reason why it seem slow at first is that because of BLITZ, we can avoid traditional system of compiled libraries - in U++, all libraries exist in source form only. If you compile any example for the first time, complete "U++ library" gets recompiled on the way (and gets cached).

Mirek

---

Subject: Re: Linux compile fails  
Posted by [iplayfast](#) on Fri, 24 Feb 2006 20:52:35 GMT  
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luzr wrote on Fri, 24 February 2006 15:48Well, BLITZ is very different system. Please read the explanation again:) OTOH, BLITZ needs to know more about what he compiles than makefiles are able to provide (it is C++ specific, goes through files, checks things and even generates some stub C++ code).

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Mirek

Well I'll not argue the point since we both agree it is cool. However perhaps you can help with a bug. In Linux the sdlexample won't link the sdl library. How do I tell it to?

---

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Subject: Re: Linux compile fails

Posted by [mirek](#) on Fri, 24 Feb 2006 20:57:07 GMT

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iplayfast wrote on Fri, 24 February 2006 15:52luzr wrote on Fri, 24 February 2006 15:48Well, BLITZ is very different system. Please read the explanation again:) OTOH, BLITZ needs to know more about what he compiles than makefiles are able to provide (it is C++ specific, goes through files, checks things and even generates some stub C++ code).

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Mirek

Well I'll not argue the point since we both agree it is cool. However perhaps you can help with a bug. In Linux the sdlexample won't link the sdl library. How do I tell it to?

In Package organizer. (Project/Package organizer).

BTW, we have not tested SDL in linux yet (In fact, SDL is not a part of U++, we have added it to Win32 version just to make things easy for people interested in game development and not necessarily interested in U++ library). I would welcome fix there - the simplest would be to post here fixed .upp and .cpp files of SDLExample package.

Mirek

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Subject: Re: Linux compile fails

Posted by [iplayfast](#) on Fri, 24 Feb 2006 21:32:43 GMT

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luzr wrote on Fri, 24 February 2006 15:57

BTW, we have not tested SDL in linux yet (In fact, SDL is not a part of U++, we have added it to Win32 version just to make things easy for people interested in game development and not necessarily interested in U++ library). I would welcome fix there - the simplest would be to post here fixed .upp and .cpp files of SDLExample package.

Mirek

OK here you go. (it works!!!)

The font.bmp needed a path change, which may not be portable back to windows.

---

### File Attachments

1) [SDLExample.upp](#), downloaded 1889 times

---

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Subject: Re: Linux compile fails

Posted by [iplayfast](#) on Fri, 24 Feb 2006 21:34:36 GMT

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---

It didn't get the cpp file.

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### File Attachments

1) [main.cpp](#), downloaded 1774 times

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---

Subject: Re: Linux compile fails

Posted by [wilho](#) on Mon, 13 Mar 2006 16:51:49 GMT

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Linking errors with version bundled with 603-dev1

----- Core ( MSC71 DEBUG DEBUG\_FULL BLITZ WIN32 MSC ) ( 1 / 2)

----- SDLExample ( MAIN MSC71 DEBUG DEBUG\_FULL BLITZ WIN32 MSC ) ( 2 / 2)

Linking...

msvcrt.lib(ti\_inst.obj) : error LNK2005: "private: \_\_thiscall type\_info::type\_info(class type\_info const &)" (??0type\_info@@AAE>@ABV0@@@Z) already defined

in LIBCD.lib(typinfo.obj)

msvcrt.lib(ti\_inst.obj) : error LNK2005: "private: class type\_info & \_\_thiscall type\_info::operator=(class type\_info const &)" (??4type\_info@@AAEAAV0>@ABV0@@@Z) already defined in LIBCD.lib(typinfo.obj)

msvcrt.lib(MSVCR71.dll) : error LNK2005: \_exit already defined in LIBCD.lib(crt0dat.obj)

msvcrt.lib(MSVCR71.dll) : error LNK2005: \_strncpy already defined in LIBCD.lib(strncpy.obj)

msvcrt.lib(MSVCR71.dll) : error LNK2005: \_strchr already defined in LIBCD.lib(strchr.obj)

msvcrt.lib(MSVCR71.dll) : error LNK2005: \_fprintf already defined in LIBCD.lib(fprintf.obj)

```
msvcrt.lib(MSVCR71.dll) : error LNK2005: _fclose already defined in LIBCD.lib(fclose.obj)
msvcrt.lib(MSVCR71.dll) : error LNK2005: __isctype already defined in LIBCD.lib(isctype.obj)
LIBCD.lib(crt0init.obj) : warning LNK4098: defaultlib 'msvcrt.lib' conflicts with use of other libs; use
/NODEFAULTLIB:library
C:\upp\out\MSC71.Debug_full\SDLExample.exe : fatal error LNK1169: one or more multiply
defined symbols found
```

There were errors. (0:08.39)

---

Subject: Re: Linux compile fails  
Posted by [iplayfast](#) on Mon, 13 Mar 2006 18:28:40 GMT  
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It looks to me like you are working in Windows with the Linux source. Better to use the windows source.

---

Subject: Re: Linux compile fails  
Posted by [wilho](#) on Mon, 13 Mar 2006 20:06:08 GMT  
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No, I haven't touch the linux version of the upp...Unless there's wrong version of some file(s) bundled with upp distrubution.

---

Subject: Re: Linux compile fails  
Posted by [iplayfast](#) on Mon, 13 Mar 2006 20:14:09 GMT  
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The subject line indicates that you are using the Linux version. The errors you are showing indicates Windows. Are you perhaps in the wrong thread?

---

Subject: Re: Linux compile fails  
Posted by [mirek](#) on Mon, 13 Mar 2006 20:24:29 GMT  
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wilho wrote on Mon, 13 March 2006 15:06No, I haven't touch the linux version of the upp...Unless there's wrong version of some file(s) bundled with upp distrubution.

OK, I agree you are in wrong topic...

However, it turns out that SDL .dll requires you to use shared runtime library, which is the problem

of your compile...

Mirek

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