Subject: how to reduce binary size?
Posted by Satervalley on Thu, 05 Jan 2023 01:53:30 GMT
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the binary size increased with version number.
my app is about thousands loc, under windows, release build, blitz disabled, CLang x64, compile option -Oz -flto, the binary size about 4m.
in the other hand, the SDL2 sample's binary size is 14KB(dynamic link to sdl dll).
about 2-3 years ago, version number 9xxx - 10xxx, the same app's binary size is about half or 1/3 of it under the newest U++.

Subject: Re: how to reduce binary size?
Posted by Novo on Sun, 08 Jan 2023 15:13:57 GMT
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TheIDE allows you to build "All static" or "Use shared libs" configs.
"All static" is a default configuration on Windows if I remember correctly. If you switch to "Use shared libs" binary size of your app will be smaller. A tradeoff is performance (dynamic name binding) and compatibility (this is usually a problem with Unix & libc).
If you build a Release conf of your app with map-file enabled you can check code size of every function linked into your app using this app.
It supports map-file formats of pretty much all compilers including old game consoles.

Subject: Re: how to reduce binary size?
Posted by zsolt on Mon, 09 Jan 2023 22:55:31 GMT
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For me, switching on BLITZ reduced binary size significantly. Why don't you enable it?

And these options also help: -ffunction-sections -fdata-sections
But I don't know why.

Subject: Re: how to reduce binary size?
Posted by Satervalley on Tue, 10 Jan 2023 01:15:48 GMT
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Because the U++ document says that Blitz can reduce compiling time but generate bigger binary(It seems it merges multi source files into a big one). and I've tested, disable Blitz reduce binary size slightly, a 3MB binary only 20KB smaller than it with Blitz enabled.

Subject: Re: how to reduce binary size?
Posted by Novo on Tue, 10 Jan 2023 15:27:01 GMT

By merging multi source files into a big one BLITZ not only reduces compilation time but also improves compiler optimization because when compiler can see more source code in one pass it is able to perform better optimization. By doing this code size can increase (because of aggressive inlining) or decrease. It depends on code.

The easiest way to understand why your app is big is to generate a map file and analyze it with amap.
If you post your map-file here I'll tell you what is wrong with your app.

Subject: Re: how to reduce binary size?
Posted by jjacksonRIAB on Tue, 17 Jan 2023 10:46:29 GMT

You could go even further with an executable packer. I use upx to compress executables further.