
Subject: pkg-config discussion

Posted by [ebojd](#) on Tue, 20 Mar 2007 13:31:39 GMT

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This is probably still a little early, but if it would not take too much time away from other things I would like to start a discussion on adding pkg-config to U++.

While I have not invested a lot of time in implementation and testing, I had played with a simple hack which allowed me to execute a generic script to grab the configuration information. The problem with this approach, as I had alluded previously, is that there are a number of computer systems security issues that should be addressed so that users cannot gain inappropriate access to system resources or run malicious scripts.

The flip side to this problem is that we do not know ahead of time *all* the package configuration tools that we will need to query. Therefore allowing U++ to run generic scripts during the build process allows the greatest functionality.

One other possibility is to develop a tool that will help cache and manage configuration info when U++ is built and installed. This will sidestep most of the subtler sys admin issues, but will complicate using configuration scripts for user applications.

I have a number of ideas and solutions for each of these design ideas, but will end the post here to solicit thoughts on the matter.

Best regards,

EBo --

Subject: Re: pkg-config discussion

Posted by [mirek](#) on Tue, 20 Mar 2007 13:41:44 GMT

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Well, do not worry, `pkg-config` is coming. The real roadblock is still missing final 2007.1 release. I do not dare to change things too much now. Once we are back on dev version release cycle, this is one of first things to happen.

I do not plan to do anything complicated, just to "interpret" strings in Package organizer before being used - scan for ` and perform command if needed (most likely just once per compilation).

This way, all that is needed is to put pkg-config call into linker and compiler options. Not very elegant, but portably working, and that is all that is important...

Of course, more elegant solution would be to put it somehow into libraries / includes, but the trouble there is that pkg-config seems to return actual command-line elements, therefore conversion back to directories / lib names would be needed.

Mirek

Subject: Re: pkg-config discussion
Posted by [ebojd](#) on Wed, 21 Mar 2007 14:32:30 GMT
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That is basically the same hack I had attempted... I was in the process of tracking down the places to poke things, etc.

That method though does open up optential scripting vulnerabilities which is something we should be mindful of -- otherwise I can see some serious headaches popping up.

I have started a discussion with Bas on a spin-off of one of his ideas using autoconf and automake to deal with most if not all of these issues. What are your prefrences Mirek?

EBo --

Subject: Re: pkg-config discussion
Posted by [mirek](#) on Wed, 21 Mar 2007 15:20:33 GMT
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I think this is mixing two issues:

Building TheIDE and building IN TheIDE...

Mirek

Subject: Re: pkg-config discussion
Posted by [ebojd](#) on Wed, 21 Mar 2007 18:48:22 GMT
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Actually I was thinking they were the same, and specifically that whatever process is adopted that the Makefile(s) will work. In the case of TheIDE it is bootstrapable. Meaning that theide can be built from within U++, and if I ask it to generate the Makefile it will produce one that will build it from the *NIX commandline.

The Makefile produced from uppsrc/ide/ide.upp is very close to being able to do just that.

EBo --

Subject: Re: pkg-config discussion
Posted by [mirek](#) on Wed, 21 Mar 2007 19:36:01 GMT
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Well, I must admit I know nothing about autoconf/automake, therefore I do not see how they would fit with the build process. Means it is a bit hard to express any preferences at this point

Mirek

Subject: Re: pkg-config discussion
Posted by [ebojd](#) on Wed, 21 Mar 2007 20:04:32 GMT
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What?!?! You cannot read my mind?

--> Psychic Detective Service seeking psychic detective.

--> Apply!

))

EBo --

ps: I'll post some thoughts for general discussion.

Subject: Re: pkg-config discussion
Posted by [guido](#) on Wed, 21 Mar 2007 21:04:14 GMT
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luzr wrote on Wed, 21 March 2007 20:36: Well, I must admit I know nothing about autoconf/automake, therefore I do not see how they would fit with the build process. Means it is a bit hard to express any preferences at this point

Mirek

autotools makes it easy to kind of shrink-wrap binaries onto any number of subtly different varieties of (mainly) POSIX ABIs. autotools plays a significant role in proliferation of Linux's self-incompatibilities.

Since this is an ISV anti-feature, it would be overkill, at best.

Guido

Subject: Re: pkg-config discussion
Posted by [ebojd](#) on Thu, 22 Mar 2007 02:57:11 GMT
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guido wrote on Wed, 21 March 2007 16:04

autotools makes it easy to kind of shrink-wrap binaries onto any number of subtly different varieties of (mainly) POSIX ABIs. autotools plays a significant role in proliferation of Linux's self-incompatibilities.

Since this is an ISV anti-feature, it would be overkill, at best.

I jsut had my browser dump my detailed reply and I am calling it quits for the night... Oh well...

In short I agree with Guido. It was an "off the top" brainstorming idea which I had not thought through. Hacking in running the scripts will work, but we should address the security issues as part of the discussion and development. The plus side is that it should be relitively easy to get it up and running...

EBo --