Subject: On-the-fly compilation of routines
Posted by gsever on Thu, 06 Nov 2008 04:16:18 GMT
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Hello,

I would like to know whether it is possible to compile a routine while
I am already running my main IDL program?
To illustrate more this, I will explain my intention a bit more. We
have a powerful IDL-based data analysis tool in our atmospheric
sciences department to analyze airborne acquired data. I am currently
working on a spectrum plot routine of the this tool-suite to make
small modification and learning purposes. I successfully debug the
routines from within the IDL Workbench, but whenever I make a change
on the program or wanted to set a new breakpoint I have to restart the
program and compile all the routines. My question is again, is there a
way to update my current routine in a way to see the changes are going
to be reflected without restarting and compiling everything?

Another point is, can we compile only the recently changed routines in
the beginning of each compilation process?

I appreciate your comments on these issues.

Thank you again.

Subject: Re: On-the-fly compilation of routines
Posted by R.G. Stockwell on Thu, 06 Nov 2008 17:23:53 GMT
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> "gsever" <gokhansever@gmail.com> wrote in message
> news:f2ca21f0-e43b-49f7-b13d-98b164701b4f@w24g2000prd.google groups.com...
> So my understanding is IDL interpreter itself can not sense the change
> and re-compile the necessary procedure throughout the flow of the
> program. Every time I make a modification on the source-code I have to
> re-compile the routine on the console or command shell to reflect this
> change.

> Once again, in the same IDL session, when I first launch the program
> 168 routines are compiled, after I make an addition the source code of
> one file, and re-run the program all 168 routines are re-compiled
> again. This is controversial to Reimer Bauer's yes answer.

You only need to recompile the program you changed.

Cheers,
bob

Subject: Re: On-the-fly compilation of routines
Posted by David Fanning on Thu, 06 Nov 2008 17:34:20 GMT
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gsever writes:

> Once again, in the same IDL session, when I first launch the program
> 168 routines are compiled, after I make an addition the source code of
> one file, and re-run the program all 168 routines are re-compiled
> again. This is controversial to Reimer Bauer's yes answer.

Yes, it suggests a poorly written IDL program, I'm afraid. :-(

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: On-the-fly compilation of routines
Posted by gsever on Thu, 06 Nov 2008 18:26:12 GMT
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The routines have been structured like Mr. Bauer said in his first reply. I would like to hear your comments about how we can improve the organization of our program.

One of my confusion has not been resolved yet. For example on a modern embedded C compiler, throughout the debugging process if I make a change on the source code and save the file, and try to observe the same function by executing a command or function, the compiler warns me to re-compile the code. While doing this, it only compiles the recently changed file (I mean as far as I understand the compiler or linker attaches a file stamp or flag them, so next time it doesn't re-compile unchanged files. This means a significant compiling speed improvement and this is something I haven't observed in IDL.

On Nov 6, 11:34 am, David Fanning <n...@dfanning.com> wrote:
> gsever writes:
>> Once again, in the same IDL session, when I first launch the program
>> 168 routines are compiled, after I make an addition the source code of

>> one file, and re-run the program all 168 routines are re-compiled
>> again. This is controversial to Reimer Bauer's yes answer.
>
> Yes, it suggests a poorly written IDL program, I'm afraid. :-(
>
> Cheers,
>
> David
>
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming:http://www.dfanning.com/
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: On-the-fly compilation of routines
Posted by David Fanning on Thu, 06 Nov 2008 18:43:06 GMT
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gsever writes:

> The routines have been structured like Mr. Bauer said in his first
> reply. I would like to hear your comments about how we can improve the
> organization of our program.
>
> One of my confusion has not been resolved yet. For example on a modern
> embedded C compiler, throughout the debugging process if I make a
> change on the source code and save the file, and try to observe the
> same function by executing a command or function, the compiler warns
> me to re-compile the code. While doing this, it only compiles the
> recently changed file (I mean as far as I understand the compiler or
> linker attaches a file stamp or flag them, so next time it doesn't re-
> compile unchanged files. This means a significant compiling speed
> improvement and this is something I haven't observed in IDL.

No, because it is typically not necessary to every recompile
everything, except when you start IDL. You are working in
the Workbench, so when you finish editing a file, and wish
to re-compile just that file, reach up and click the "Compile"
button. (It looks like a set of gears. Don't ask me.) Just
that one file you are working on gets compiled. On my Windows
machine CNTL-F8 does the same thing.

Cheers,

David
--

David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: On-the-fly compilation of routines
Posted by sbolin42 on Thu, 06 Nov 2008 19:03:50 GMT
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There is also an option to recompile a file every time you save it.
Windows->Preferences->IDL->Editor->Enable compile on save

-Scott

Subject: Re: On-the-fly compilation of routines
Posted by gsever on Fri, 07 Nov 2008 01:15:16 GMT
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Thank you Scott. This the option that I was looking for :)

Now I have been looking ways to our program not to load all 168
modules in the entree state. I understood that IDL will load necessary
modules throughout the program flow.

Actually there is an alternative way to launch the program by using
already compiled binary sav image, which my system shows 1 second
speed improvement for each different version of calling the program.
When I run the program without any input arguments it my computer
takes about 2 second to compile all the routines. I am sure this could
be improved more.

On Nov 6, 1:03 pm, skydome <sboli...@gmail.com> wrote:
> There is also an option to recompile a file every time you save it.
> Windows->Preferences->IDL->Editor->Enable compile on save
>
> -Scott

Subject: Re: On-the-fly compilation of routines
Posted by R.Bauer on Fri, 07 Nov 2008 08:26:01 GMT
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gsever schrieb:
> Thank you Scott. This the option that I was looking for :)
>

> Now I have been looking ways to our program not to load all 168
> modules in the entree state. I understood that IDL will load necessary
> modules throughout the program flow.
>
> Actually there is an alternative way to launch the program by using
> already compiled binary sav image, which my system shows 1 second
> speed improvement for each different version of calling the program.
> When I run the program without any input arguments it my computer
> takes about 2 second to compile all the routines. I am sure this could
> be improved more.

on which platform do you program?

>
> On Nov 6, 1:03 pm, skydome <sboli...@gmail.com> wrote:
>> There is also an option to recompile a file every time you save it.
>> Windows->Preferences->IDL->Editor->Enable compile on save
>>
>> -Scott
>

Subject: Re: On-the-fly compilation of routines
Posted by R.Bauer on Fri, 07 Nov 2008 08:44:36 GMT
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Andrew Cool schrieb:
>> mean is a idl source function. You can open it by .edit mean on the idl input line.
>
> Well I'll be!!
>
> 17 years programming in IDL and I never knew this.
>
> What else don't I know? I'll go ask my wife - she'll tell me... ;-)
>
> Andrew
>

Hi Andrew!

On the other hand I know you know things I don't know, that's why I love
since several years this group.

cheers

Reimar

Subject: Re: On-the-fly compilation of routines
Posted by David Fanning on Fri, 07 Nov 2008 11:37:19 GMT
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Reimar Bauer writes:

> Andrew Cool schrieb:
>>> mean is a idl source function. You can open it by .edit mean on the idl input line.
>>
>> Well I'll be!!
>>
>> 17 years programming in IDL and I never knew this.
>>
>> What else don't I know? I'll go ask my wife - she'll tell me... ;-)
>>
>> Andrew
>>
>
>
> Hi Andrew!
>
> On the other hand I know you know things I don't know, that's why I love
> since several years this group.

This reminds me of a discussion we had several weeks ago that
I forgot to follow up on. Someone was trying to compile a large
program project with a script that did a .COMPILE on his files.
This worked fine in some earlier version of IDL, but had the
effect of opening hundreds of edit windows in later versions.

I happened to ask about this when I was around some ITTVIS types
who were likely to know the answer. It turns out that .COMPILE
is now the equivalent to the command sequence .RUN/.EDIT. And
that what the person needed to do was replace all his .COMPILE
commands with .RUN.

This sort of turns the .COMPILE command back on its head,
since I originally argued for it on the basis that no one
outside of RSI could figure out why .RUN only compiled and
didn't run anything, and that is why we needed a .COMPILE
command.

Anyway, I suppose when your institutional memory leaves the
company, it's easy to forget why you did things originally. :-)

Cheers,

David
--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: On-the-fly compilation of routines
Posted by R.Bauer on Fri, 07 Nov 2008 13:03:36 GMT
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David Fanning schrieb:
> Reimar Bauer writes:
>
>> Andrew Cool schrieb:
>>>> mean is a idl source function. You can open it by .edit mean on the idl input line.
>>> Well I'll be!!
>>>
>>> 17 years programming in IDL and I never knew this.
>>>
>>> What else don't I know? I'll go ask my wife - she'll tell me... ;-)
>>>
>>> Andrew
>>>
>>
>> Hi Andrew!
>>
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> This reminds me of a discussion we had several weeks ago that
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> didn't run anything, and that is why we needed a .COMPILE
> command.
>
> Anyway, I suppose when your institutional memory leaves the
> company, it's easy to forget why you did things originally. :-)
>
> Cheers,
>
> David

indeed that is a stupid misbehaviour of idl 7.0 again. luckily it does
not crash the idl shell (because of a missing edit window).

In the past the .run dot command was used to compile and execute main
programs. There was no difference between the shell and the ide.

Now it behaves this way only if you don't use the ide :(

Reimar

Subject: Re: On-the-fly compilation of routines
Posted by Kenneth P. Bowman on Fri, 07 Nov 2008 14:41:12 GMT
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In article <MPG.237dd652953c0f9d98a510@news.giganews.com>,
David Fanning <news@dfanning.com> wrote:

> This reminds me of a discussion we had several weeks ago that
> I forgot to follow up on. Someone was trying to compile a large
> program project with a script that did a .COMPILE on his files.
> This worked fine in some earlier version of IDL, but had the
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> command.
>
> Anyway, I suppose when your institutional memory leaves the

> company, it's easy to forget why you did things originally. :-)
>
> Cheers,
>
> David

In true unix fashion, I always .r my programs to recompile them. Why type
all of those extra characters. ;-) (.com will work, but .c is not unique).

Cheers, Ken

Subject: Re: On-the-fly compilation of routines
Posted by Foldy Lajos on Fri, 07 Nov 2008 19:19:52 GMT
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On Fri, 7 Nov 2008, Kenneth P. Bowman wrote:

> In true unix fashion, I always .r my programs to recompile them. Why type
> all of those extra characters. ;-) (.com will work, but .c is not unique).

.r is not unique either (.run/.reset :-)

regards,
lajos

Subject: Re: On-the-fly compilation of routines
Posted by Kenneth P. Bowman on Fri, 07 Nov 2008 20:53:52 GMT
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In article <Pine.LNX.4.64.0811072016520.27772@lxserv1.kfki.hu>,
FOLDY Lajos <foldy@rmki.kfki.hu> wrote:

> On Fri, 7 Nov 2008, Kenneth P. Bowman wrote:
>
>> In true unix fashion, I always .r my programs to recompile them. Why type
>> all of those extra characters. ;-) (.com will work, but .c is not unique).
>
> .r is not unique either (.run/.reset :-)
>
> regards,
> lajos

But .r expands to .run, while .c expands to .continue. I'm sure there's a
logical reason. :-)

Ken

Subject: Re: On-the-fly compilation of routines
Posted by R.Bauer on Mon, 10 Nov 2008 09:08:06 GMT
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Kenneth P. Bowman schrieb:
> In article <Pine.LNX.4.64.0811072016520.27772@lxserv1.kfki.hu>,
> FOLDY Lajos <foldy@rmki.kfki.hu> wrote:
>
>> On Fri, 7 Nov 2008, Kenneth P. Bowman wrote:
>>
>>> In true unix fashion, I always .r my programs to recompile them. Why type
>>> all of those extra characters. ;-) (.com will work, but .c is not unique).
>> .r is not unique either (.run/.reset :-)
>>
>> regards,
>> lajos
>
> But .r expands to .run, while .c expands to .continue. I'm sure there's a
> logical reason. :-)
>
> Ken

no it is a bug. ;)

At least if you see it in comparison to the keyword logic.

cheers
Reimar
